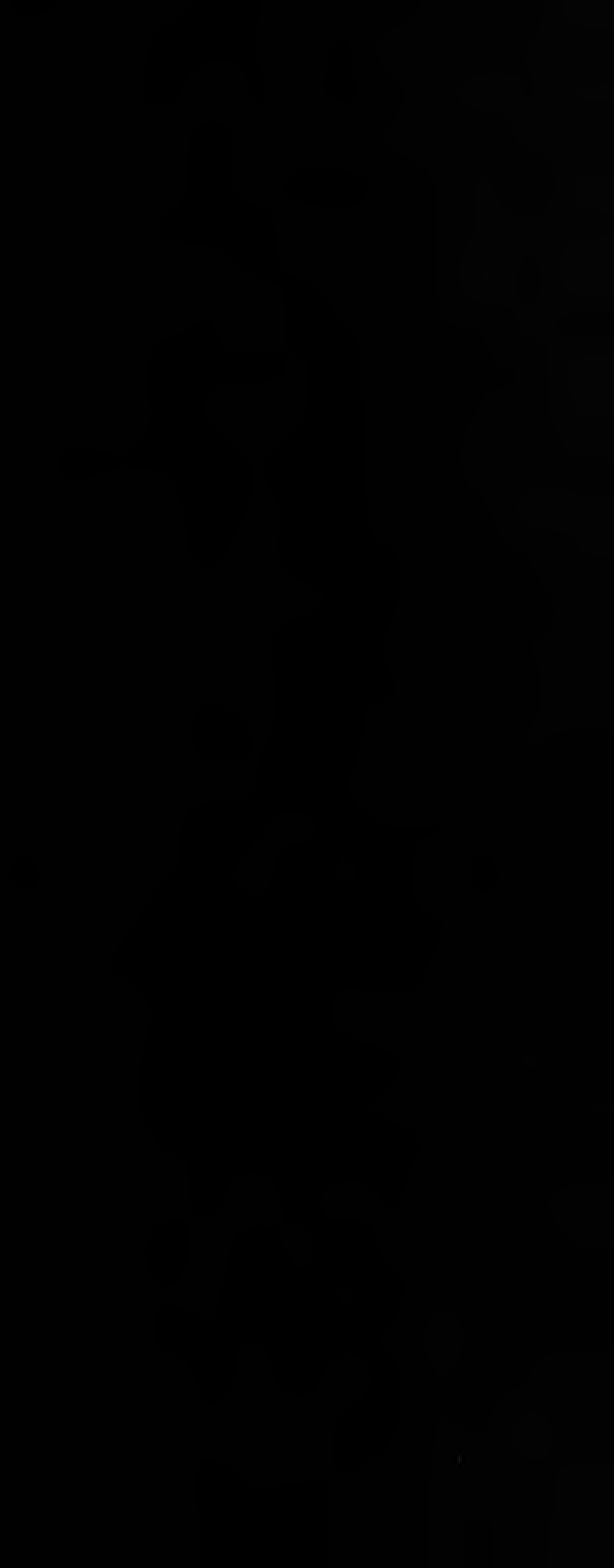

Historical Collection

THE LIBRARIES

COLUMBIA UNIVERSITY

HEALTH SCIENCES
LIBRARY

FEB 2 7 1979. K

Digitized by the Internet Archive
in 2014

https://archive.org/details/newyorklancet2184hous

THE

NEW YORK LANCET.

EDITED BY

JAMES ALEXANDER HOUSTON, M. D.

VÉRITÉ SANS PEUR.

VOL. II.

JULY—DECEMBER, 1842.

NEW YORK:

PUBLISHED BY J. G. BENNETT AND J. A. HOUSTON, AT THE LANCET OFFICE,
CORNER OF NASSAU AND FULTON STREETS.

PRINTED AT THE HERALD BUILDINGS.

MDCCCXLII.

CONTENTS OF VOLUME SECOND.

LECTURES.

Budd's, George, M. D., F. R. S., Lecture on Delirium Tremens, 19.

Hunter's, John, F. R. S., Lectures on Gonorrhœa and Syphilis.

Lecture I. Virulent Gonorrhœa, 23. II. Gonorrhœa in Females, 35. III. Treatment of Virulent Gonorrhœa, 35. IV. Treatment of the Constitution in Virulent Gonorrhœa, 51. V. On Gleet and Stricture, 52. VI. On Chancre, &c.—Warts and Buboes—Buboes in Women—Constitutional Venereal Disease, 67. VII. The Venereal Disease, 84.

Marsh's, Sir Henry, Bart., M. D., Lecture on the Evolution of Light from the Living Human Subject, 369, 389.

Nelson's, Robert, Dr., Lecture on Physiology, 337.

Seymour's, Dr., Clinical Lecture on Diseases of the Heart, Liver, and Kidneys—Ascites and Anasarca, 87.

Swett's, John A., Dr., Lectures on Diseases of the Chest, Percussion, and Auscultation.

Lecture XIII. Hooping-cough—Pathology—Symptoms—Progress and Duration—Complications—Congestion of the Brain—Pneumonia—Pleuritis—Treatment of the Disease—Foreign Bodies in the Trachea and Larynx, 1. XIV. Croup—Pathology—Its Causes—Various Forms—Complications—True and False Croup—Diagnostic Characteristics—Treatment—Tracheotomy, 17. XV. Laryngitis—Pathology—Treatment—'Clergyman's Sore Throat'—Pathology—Treatment, 33. XVI. Pneumonia—Several Stages—Their Pathology—Pneumonia of Children, of Adults, of Old People—Different Characters—Relative Mortality—Statistical Table of Cases in the Hotel Dieu, 49. XVII. Pneumonia continued—Its Duration—The Causes of Pneumonia—Influence of Climate, Age, Sex, Predisposition, and particular Bodily Positions on its Production—Chronic Pneumonia, 65. XVIII. Pneumonia continued—Its Complications—Pleurisy—Bronchitis—Delirium—Jaundice—Symptoms of Pneumonia in Adults—Physical Signs—Rational Signs—Duration of the Disease, 100. XIX. Symptoms of Pneumonia continued—The Pain—Cough—Expectoration—Respiration—Physical Signs—Crepitant Rale—Symptoms of Pneumonia as Developed in Old People—In Children, 117. XX. 'Typhoid Pneumonia'—'Bilious Pneumonia'—'Gangrene of the Lungs,' 145. XX. continued. Self-limited Diseases—Treatment of Pneumonia—M. Bouillaud and M. Louis' Mode of Treatment—Treatment of the Pneumonia of Children, 161. XXI. Pulmonary Emphysema—How distinguished from other Diseases—Treatment—Pulmonary Apoplexy—Causes—Diagnosis—Treatment—Pulmonary Œdema—Its Pathology—Treatment, 193. XXII. Tubercles in the Lungs, 262.

Velpeau's, Professor, Clinical Lecture on the Treatment of Gonorrhœa, 353.

Watson's, Dr., Lecture on Colica Pictonum, 196. On the Pathology and Treatment of Peritonitis, 322.

REVIEW DEPARTMENT.

Academy of Science in Paris, Report made to, by the Gelatine Commission 164, 183

American Medical Library and Intelligencer 170

Asylum Journal, published by the Inmates of the Vermont Asylum 331

Auscultation and Percussion, Elementary Treatise on, or the Application of Acoustics to the Diagnosis of Diseases. By A. Raciborski, M. D. 362

Births, Deaths, and Marriages in England, Registrar-General's Third Annual Report of, with Appendices 8, 24

Castleton Medical College, Introductory Lecture delivered before the Medical Class in. By David M. Reese, A. M., M. D. 163

Catharine Hospital at Stuttgart, Medical Statistics of the Interior Division of. By Dr. George Cless 243

Chemistry, Animal, or Organic Chemistry, in its applications to Physiology and Pathology. By Justus Liebig, M. D. 146

Chemistry, Elements of. By Robert Kane, M. D. . . . 146

Child-Bed Fever or Weed, Prevention and Management of. By William Kerr, Surgeon 135

College of Physicians of Philadelphia, Quarterly Summary of the Transactions of 69, 88, 401

Cunier's Annales d'Oculistique, Gleanings from 150

De l'Ophtbalmic qua Règne dans l'Armée Belge et des Moyens d'Arrêter la Propagation de cette Maladie dans toute agglomération d'Individus. Par H. P. Gouzée 90

Drunkenness, Dr. Francis on the Anatomy of 307

Egypt, The American in, with Rambles through Arabia Petræa and the Holy Land. By J. E. Cooley . . . 170

Enchiridion Medicum; or Manual of the Practice of Medicine. By C. W. Hufeland, Physician to the King of Prussia, &c. 233

Eye, Treatise on the Diseases of. By W. Lawrence, F. R. S. 395

Geneva College, Introductory Lecture to the Course of Instruction in the Medical Institution of. By Thomas Spencer, M. D. 347

Hare-Lip, Double, Case of—period of life most suitable for operating for this deformity. By Mr. Houston. . 56

Heart and Great Vessels, Treatise on Diseases of. By J. Hope, M. D., F. R. S. 139

Homœopathy, Popular View of. By Rev. Thomas H. Everest 299

Human Anatomy, System of, General and Special. By Erasmus Wilson, M. D. 347

Intestinal Glands, Origin and Development of the Diseased Condition of, which occurs during the course of certain forms of continued Fever. By John Goodsir, Esq. 200
Kiesteine, Experiments on, with Observations on its Application to the Diagnosis of Pregnancy. By Elisha K. Kane, M. D. 53
Lead Pipes, Effects of, upon Well Water, in the City of Lowell. 248
Leprosy and Leper Hospitals in Scotland and England, Antiquarian Notice of. By James Y. Simpson, M. D. 7
Lithotomy and Lithotrity. By Edwin Lee, Esq. 212
London Dissector, or Guide to Anatomy. By Edward J. Chaisty, M. D. 362
Massachusetts Medical Society, Medical Communications of. 119
Medical Society of the City and County of New York, Address delivered before the. By James R. Manley, M. D., President. 198
Medical Society of the State of New York, Report of a Committee of, on the subject of Medical Education. 241
Medical Institute of Louisville, Account of the Origin and Present Condition of, with Remarks on a late Rejected Report. 248
Medicine and Surgery, Braithwaite's Retrospect of. . 315
Medical Student's Guide. By Heber Chase, M. D. 347
Memoires de l'Academie Royale de Médecine. 37
Midwifery, The Dublin Practice of. By Henry Maunsell, M. D. 282
Midwifery, Lectures on the Principles and Practice of. By James Blundell, M. D. 362
Mineral Springs of Western Virginia; with remarks on their use, and the Diseases to which they are applicable. By William Burke. 71
Missionary Enterprise, Claims of, on the Medical Profession By Daniel J. Macgowan, M. D. 315
New Haven Medical Association, Constitution and Bye-Laws of. 170
New York Lyceum of Natural History, Dr. Francis' Discourse, delivered upon the Opening of the New Hall of the. 3
Pathology, founded on the Natural System of Anatomy and Physiology. By Alexander Walker, M. D. 102
Phthisis, Observations on the Statistics of, and on the Influence of Climate and Occupation in the Production and Development of that Disease. 38
Philosophical Society of Glasgow, Report to, by the Physiological Committee 'On the best means of providing cheap and nourishing Food for the Poor,' 164, 183
Physiology. Elements of. By J. Müller, M. D. 395
Physic, Lectures on the Theory and Practice of. By William Stokes, M. D. 315
Provincial Medical and Surgical Association, Transactions of. 104
Puerperal Fever and Crural Phlebitis, History, Pathology, and Treatment of. By Chas. D. Meigs, M. D. 122
Pulmonary Diseases, Influence of Malaria upon. By Horace Green, M. D. 133
Richerand, Biographical Notice of; his Disputes with Dupuytren, &c. 40
Smith, John Augustine, Dr., Exposition of the Conduct and Character of. By James R. Manley, M. D. 138
Surgery, Modern, the Principles and Practice of. By Robert Druitt. 58
Surgery, Elements of. By Robert Liston, Surgeon to the North London Hospital, &c. &c. 122
Typhoid and Typhus Fever, History, Diagnosis, and Treatment of, with an Essay on the Diagnosis of Bilious Remittent and of Yellow Fever. By Elisha Bartlett, M. D. 248
Urethra, Stricture of. By Arnott, Wade, Cooper, Arntzenius, &c. 230
Vaccination, Mr. Brown on the Unsatisfactory and Defective State of. 5
Variolæ Vaccinæ, Further Observations on. By Mr. Robert Ceely. 166
Venereal Diseases, Practical Treatise on. By Ph. Ricord, M. D. 282
Vermont Asylum for the Insane, Sixth Annual Report of the Trustees of. 347

GLEANINGS FROM THE FOREIGN JOURNALS.

Abscesses, Chronic, Application of the Subcutaneous Method to the opening of. 328
Amputations performed in the Parisian Hospitals, Statistics of. 356
Amputations. 408
Aorta, Annular Contraction, or Stricture of. 345
Aphthæ, Parasites in. 376
Artificial Anus, Case of Lumbar, terminating successfully. By M. Amussat. 407
Bladder, Abscess in the Substance of the Walls of. 328
Brain, Wound of the. 360
Breast, Contusion of. 374
Cardiac Disease and Chlorosis, Diagnosis between Palpitations from. 344
Cœcum, Inflammation of—Accumulation of Fæces. .. 376
Confined Air, Composition of. 406
Cough, Suffocating. 359
Delirium connected with certain States of the Heart in Fever. 311
Dislocation, Statistics of. 368
Dysentery. 343
Encephaloid Tumor. 344
Entropion. 329
Erysipelas. 377
Fingers, Re-union of. 342
Foundling Hospitals, Turning Boxes at. 416
Fracture, Congenital Ununited. 344
Gallstones. 328
Gouty Concretion with a New Method of Treatment. 310
Hydrencephalocele. 375
Hydrocele, Iodine in. 344
Hyeres. 376
Iliac Fossa, Abscess of. 360
Infanticide. 342
Intestine, Treatment of Injured, from a Blow upon a Hernial Sac. 311
Leucorrhœa in Children. 343
Lightning Rods. 359
Malphigian Bodies of the Kidney, Stricture and Use of the. 341
Mania, Blood-letting in. 328
Maxims, Abercrombie's, for Medical Men. 360
Medical Profession, Difficulties of, not to be Considered as Discouragements. 359
Metallic Tinkling, The Causes of. 375
Myelitus Infantum. 329
Necrosis of the Os Calcis. 343
Otitis and Otorrhœa. 359
Ovaries, Excision of Diseased. 313
Œdema of the Glottis, Researches into the real Nature of. 327
Penis, Strangulation of, by a Ring. 345
Phthisis. 376
Plants, Medicinal, Adulteration of. 376
Primæ Viæ, Derangement of. 344
Purgatives, Use of Drastic. 360

Rectum, Fissure of ... 344
Retina, Amaurosis from Pressure on... 179
Rheumatism, Opium in... 344
Saccharine Diabetes, Researches on... 327
Sacro-Ischiotic Ligaments, Section of... 359
Sappers and Miners, Disease of... 326
Small Hospitals... 360
Stomach, Spasm of... 345
Syphilis, Inoculation as a Test of... 182
Syphilis, Ioduret of Potassium in... 360
Symblepharon... 374
Tracheotomy... 181
Tracheotomy in Croup, On the Operation of, performed at the Children's Hospital, and on its Results. By A. Becquerel, M. D... 405
Trichiasis... 360
Urethra and Hypertrophy of the Bladder, On Stricture of the... 355
Urethroplasty... 408
Urinary Calculi, Solution of... 406
Urine, Albumen in... 341
Uterus, Double... 377
Uterus, Extirpation of... 343
Vaccination... 416
Varicocele, Treatment of... 181
Varix, Treatment of... 180

EDITORIAL DEPARTMENT.

American Medical Press—Duty of its Conductors... 90
Anatomy, Practical, Study of... 235
Boston Medical and Surgical Journal, and Medical Educational Reform... 122
Castleton Medical College... 10
City Hospital... 314, 362
Coroners... 345
Coroners' Inquests, Medical Fees at... 42
Coroners' Inquests, Post-mortem Examinations at... 105
County Medical Society Reading-Room... 170
Crosby-street College... 202
Emigrant Vessels, Surgeons in... 68
Forry, Dr., on the Variety of Races... 137
French Academy of Sciences... 346
Interments, Registry of City... 74
Lectures at the Colleges... 299
Malaria, Dr. Green on the Influence of... 137
Manley's, Dr., Exposition... 201, 235
Manley, Dr., v. Dr. J. Augustine Smith... 91
Medical and Surgical Curiosities of New York... 153
Medical Education,. .9, 42, 153, 169, 217, 233, 361, 378, 393
New Discovery... 409
New York Hospital, New Era in the History of—Extraordinary Operation... 295
New York Medical Schools... 185, 377
New Work by Dr. Forry... 170
Operation by Dr. Post... 299
Paine, Professor... 250
Pattison, Dr., Defence of... 187
Periodicals, Weekly Medical... 137
Physiology, Dr. Nelson's Lecture on... 282
Reese, David M., Dr... 59
Smoked Beef, Report on the Effects Produced by Poisonous... 329
Society for the Collection and Arrangement of Medical Statistics, and the Promotion of Medico-Chirurgical Science... 154
Stuyvesant Faculty... 283
Stuyvesant Institute... 250
Stuyvesant Institute School, versus the Cause of Medical Education... 25
The 'Phenomenon'... 187
Thymus Gland... 249
Widows and Orphans' Fund Association... 10

ORIGINAL COMMUNICATIONS.

Cancrum Oris, Case of, successfully treated. By Wm. S. Sanders, M. D., Storrbridge, Mass... 140
Capsule, Laceration of the, for the Removal of Capsular Cataract. By Middleton Goldsmith, M. D... 94
Cataract of six years' standing successfully treated by Heratonyxis. By John R. Dickson, M. D... 236
Extraordinary Case. By John B. Newman... 155
Eyeball, Muscles of. By Mrs. Griffith... 257, 273
Eye, Air Bubbles in the Fluids of the. By Mrs. Griffith... 209, 225
Face, Paralysis of, successfully treated with Strychnine. By B. F. Joslin, M. D... 315
Fever, Billious, Account of, as it prevailed in Newbern, N. C., in the Fall of 1841. By Geo. H. Taylor, M. D... 59
Gilman, Professor, Card from... 160
Good Physician, Life of a... 256
Gun-shot Wound, Successful Treatment of. By W. Magee, M. D... 92
Hæmatemesis, Case of Fatal. By W. D. Jefferson, M. D... 125
Intemperance, Death from—Post-mortem Appearances. By R. A. Severance, M. D... 283
Iris, Cases of Laceration of. By Middleton Goldsmith, M. D., Prosector in Surgery, College of Physicians and Surgeons, New York... 123
Iris, Cases of Aperture in the. By Middleton Coldsmith, M. D., Prosector of Surgery, College of Physicians and Surgeons, New York... 139
Lens, The Crystalline. By Mrs. Griffith... 334, 349
Manley, Dr., and Dr. J. A. Smith, and the College of Physicians and Surgeons... 288
Manley, Dr., Replication of, to the Card published by Dr. Gilman... 173
Medical Reform. By James R. Manley, M. D... 221
Medical Reform. By Q. E. D... 278, 289, 305
Medical Reform. By J. A. Allen, A. M., M. D... 321
Parotid Gland, Scirrhus of the, successfully treated by Tying the common Carotid Artery, with Cases. By Alexander E. Hosack, M. D... 74
Philosophical and Physiological Reflection suggested by the perusal of J. Liebig's Organic Chemistry. By Thomas Hall, of Boston, Mass... 385
Plagiarism, Art of... 207
Pleuræ Pulmonalis, Rupture of, in Tubercular Consumption. By Wm. Grey, M. D... 165
Pleuritis, Chronic, Case of, with copious Effusion within the Thorax, successfully treated. By A. Beardsley, M. D... 397
Public Hygiene... 293
Pulmonary Diseases, Sanative Influence of Malaria in. By Horace Green, M. D... 154
Spectacles—More Light—Better Light... 126
Syphilis, Remarks on a peculiar form of. By James E. Ward, Assistant Surgeon to the Hospital Retreat... 75
Thomsonian or Animal Magnetised Victim, Death of another. By Stephen W. Williams, M. D., late Lecturer on Botany and Medical Jurisprudence in Dartmouth Medical College, N. H., &c... 124

THE MEDICO-CHIRURGICAL REPORTER.

Albany Medical College. Dr. March's Surgical Clinique 396
Amaurosis, Ocular Myotomy in certain cases of 254
Aneurism, Multilocular, of the Thoracic Aorta 46
Aneurism at the Origin of the Left Carotid treated by Ligature on the Distal Side. By M. Colson 12
Antrum of Highmore, Wound of the, with destruction of the Eye; fragment of a Knife-blade removed from the Antrum two years afterwards. By W. H. Donne, M. D 236
Arsenic, Case of Poisoning by. By Charles C. Hildreth, M. D 93
Ascites and Ovarian Dropsy Diagnosis of, by Percussion 77
Bladder, Catarrh of the 95
Bladder, Prolapsus of the, Cured by Operation By R. T. Lightfoot, Esq 414
Cancer of the Womb, Incipient. By Dr. Montgomery, A. M., Professor of Midwifery to the King and Queen's College of Physicians in Ireland 252
Carcinoma in General, and Cancer of the Stomach. By John Le Conte, M. D 284, 299
Carotid Artery, Ligature on the Common, for an Erectile Tumor of the Orbit. By M. Jobert 12
Case of Penetrating Wound of both Lungs Recovery. By A. N. Ruddock, M. D., Bristol 379
Catalepsy, Case of, with Transposition of the Senses. By Dr. Duvardo, of Caen 347
Cataract, Modification in the Operation of Depression for. By John Morgan, Esq 13
Cataract suddenly formed in both Eyes 107
Chorea, Strychnine in. By M. Foulhieux 76
Chlorosis, Cure of, by Iron 399
Colon, Intestinal Obstruction from Stricture of the Sigmoid Flexure of. By T. P. Teale, Esq 204
Colon, Scirrhus of the Sigmoid Flexure of 202
Convulsions, Infantile, Treated by Ice to the Spine. By R. B. Todd, M. D 156
Coxalgia, Conium Maculatum in. By William Parkinson Overton, M. D 272
Crosby Street College Surgical Clinique 396, 410
Croup, Treatment of, by frequently repeated Emetics. By Dr. Marotte 220
Crowing Inspiration of Children, Five Cases of, which occurred in the same family. By Jonathan Toogood, Esq 364
Dermalgia, Rheumatic, or Rheumatism of the Skin 45
Diabetes Mellitus, New Researches on. By M. A. Bouchardat 141
Diarrhœa—Sporadic Cholera—Epidemic Cholera 28
Dislocations of Orbicular Joints, M. Colombot's Method of Reducing 190
Dysentery, Acute Tropical, Treatment of 108
Exhaustion, Case of, without an Apparent Sufficient Cause. By Jonathan Toogood, Esq., Senior Surgeon to the Bridgewater Infirmary 379
Ecchymosis from Injury simulating Laceration of an Artery of the part 331
Ergot producing Abortion in Cows 221
Femoral Artery, Aneurism of the, cured by Ice. By Middleton Goldsmith, M. D 269
Femoral Aneurism, Ligature of the External Iliac Artery for. By William Power, M. D., one of the Attending Physicians to the Baltimore Alms-house Hospital 187
Fingers, Contraction of, Cured by Electricity 108
Fish-liver Oil, On the Medicinal Properties of 44
Fistulæ, Urinary, Treatment of. By M. Ricord 110
Fort Fairfield, Maine, Statistics of. By Dr. Coolidge, U. S. A 265
Fracture of the Fore-arm, Case of Un-united, of four years standing, successfully treated. By Charles S. Tripler, M. D 237
Fractures by Division of Tendons, On the Treatment of Old. By Dr. Dieffenbach 30
Gangrene, Spontaneous, of the Neck of the Uterus 30
Gelee pour le Goitre. By Mr. Thomas Beesley 272
Gleet, Tincture of Sesquichloride of Iron in 349
Gonorrhœal Rheumatism 398
Gun-shot Wound of the Face, Case of, with loss of a greater portion of the Tongue, and extensive lesion of the bony structure, successfully treated. By J. F. Peebles, M. D., Petersburg, Va 61
Hernia, Cases of Strangulated, with Remarks. By J. Mason Warren, M. D 61
Hydrocele, New Mode of Treating. By J. Pancoast 236
Hydrocephalus, Acute, On the Employment of Cold Affusion in. By D. Munchmeyer 155
Humerus, Reduction of a Congenital Dislocation of the, at the end of Sixteen Years. By Dr. Gaillard 12
Hymen, Imperforate, with Clinical Remarks. By Mr. Arnott 31
Immobility on the Articulations, Effects of. By M. Teissier 221
Indigestion 349
Iodine Injections for Serous Cysts 96
Ioduretted Mercurial Syrup for the Treatment of Secondary Syphilis 45
Iritis, Case of Rheumatic. By R. K. Diossy 287
Iron, New Preparation of 43
Kidneys, Worms in 11
Laceration of the Womb, Case of. By N. L. M'Guire, M. D. and B. W. Groce, M. D., of Alabama 411
Lithotomy, Hæmorrhage after 30
Leeches, Poisoning of, by the Blood of the Sick. By Stefano Grandani 42
Lime Moxa 46
Lungs, Abscesses in, Recovery from. By Dr. Graves 106
Mammary Abscess, Use of Compression in. By MM. Trousseau and Contour 13
Neuralgia and Chronic Rheumatism, Tincture of Aconite in. By Joseph Curtis, Esq 109
Nicotine 143
Opium Smoking as a Remedial Agent. By Dr. James Johnson 272
Oxide of Zinz Ointment, Efficacy of, in Certain Diseases of the Skin 95
Paraphymosis, Extract of Belladonna in the Reduction of. By Dr. Mignót, of Bordeaux 14
Paraphymosis, Treatment of 95
Parturition under Unusual Circumstances 333
Phthisis, Chronic Catarrh, &c., Diuretics in 142
Phthisis Pulmonalis, with a Fistulous Opening in the Parietes of the Chest 13
Phthisis Pulmonalis, Diagnosis of 91
Pleurisy, Chronic, Treatment of, with Effusion. By the late James Hope, M. D., Assistant Surgeon to St. George's Hospital, London 203
Pneumonia of the left Lung, Abscess from. By Lewis A. Sayre, M. D 270
Poisoning by Morphia, On Coffee as an Antidote in. By Dr. B. Fosgate 156
Pregnancy, Case of Extra-Uterine, in which Gastrotomy was successfully performed. By MM. Mathieu and Bressolles, of the Hospital of La Charité sur Loire 171

Pregnancy, Extra-Uterine.......... 399
Prolapsus Recti, Treatment of, by the Actual Cautery, 349
Purpura, Case of, with Destructive Disease of the Ankle-Joint. By F. A. Bulley, Esq., Surgeon to the Royal Berkshire Hospital, Reading.......... 380
Rectum in Children, Polypi of the.......... 95
Rheumatism, Case of Acute—Pericarditis—Sudden Death. By P. Hennis Green, M. B.......... 412
Rheumatism, Hot and Cold Forms of, and their Treatment. By D. Taylor.......... 206
Rheumatic Dermalgia. By J. H. Beau.......... 207
Ribs, Injury to the Cartilages of the—Removal of a portion of them, and Cure.......... 332
Scrivener's Spasm Cured by Division of Muscles. By Professor Stromeyer.......... 94
Sea Water, Artificial.......... 156
Serous Cysts, Iodine Injections for.......... 109
Spleen, Case of Spontaneous Rupture of. By G. Bodichon, M. D., of Algiers.......... 398
Solanum Tuberosum, Medicinal Properties of.......... 43
Strangulated Hernia, Case of. By Drs. L. and H. H. Little, of Deavertown, Ohio.......... 11
Submaxillary Gland, Extirpation of the. By M. Colson, of Noyon.......... 31
Suture of Conjunctiva after Division of Adductior. By M. Cunier.......... 238
Syphilis, Cases of Apoplexy consequent on: with Clinical Remarks. By Dr. Budd, Professor of Medicine in King's College Hospital, London.......... 250
Temporal Artery, On the Opening of. By Hugh Carmichael, Esq., A. M.......... 413
Thigh, Injury of. By W. C. Sneed, M. D., of Frankfort, Ky.......... 415
Thorax, Ulcer of, communicating with the Right Lung, in a case of Pulmonary Consumption.......... 333
Thymic Asthma, Case of. By Benjamin Dennis, M.D., of Cincinnati, Ohio.......... 10
Tooth-bone, Vascularity of.......... 221
Traumatic Tetanus, Case of, successfully treated by the Sesquicarbonate of Iron. By G. Wollam, M.D. 363
Trembles and Milk-Sickness, Facts and Conjectures on the.......... 219
Tumor, Case of, developed in the midst of the Causa Equina. By W. W. Fisher, M. D.......... 363
Twins, Remarkable Birth of. By Dr. Schroder.......... 220
Typhoid Fever in a Patient Sixty-three Years Old. By Elisha Bartlett, M. D.......... 411
Ulcers, Varicose, Treatment of. By Dr. Hayward... 107
Urinary Bladder, Explanation on the Difference in size of the Male and Female. By John Le Conte, M. D.......... 287
Urine, Milky, Case of.......... 42
Vagina, Adhesions and Strictures in the, during Pregnancy and Labor. By Dr. Doherty, Dublin.......... 141
Vomiting, On the Mechanism of. By Middleton Goldsmith, M. D. and John Le Conte, M. D.......... 267

THE COLLATERAL SCIENCES.

Aorta, Obliteration of, beyond the Arch.......... 320
Blood Vessels, Contractility of.......... 238
Brain, M. Foville on the Anatomy of.......... 77
Confervæ, Contagious, Formation of, on Living Frogs. By Dr. Stilling.......... 191
Diseases which affect corresponding parts of the Body in a Symmetrical Manner. By Wm. Bird, M. D... 318
Eye, Anatomical and Pathological Remarks on Inflammation of some internal parts of, and, in particular, on Choroiditis as the cause of Glaucoma. By J. L. C. Schroeder Van der Kolk.......... 366
Heat, Animal, Cases proving the Influence of the Cerebro-Spinal Axis in the production of. By M. Brugnoli.......... 110
Hippuric Acid. By Alexander Ure, M. D., A. M.... 125
Lens, The Crystalline.......... 96
Liver, Uses of. By John Bostock, M. D.......... 143
Mathematics, Application of, to the Science of Medicine.......... 319
Poisons, Mode in which they enter the Human System. By Samuel Lane, Esq.......... 378
Pathology, The Old Humoral.......... 14
Rotatory Movements of the Yolk in the Ovum of Mammalia, during its passage through the Fallopian Tube. By Prof. J. L. W. Bischoff.......... 238
Secreting Structure, Ultimate, Abstract of Mr. Goodsir's paper on, and on the laws of its Function.... 47
Spleen, Function of. The Spleen an assistant Circulatory Organ. By John Jackson, Esq.......... 157
Taste, Sense of.......... 399
Tubercle, Secretion of. By Thomas Hodgson Watts, M. D.......... 171

MISCELLANEOUS ITEMS AND INTELLIGENCE.

Abdominal Supporters.......... 208
Abstinence or Temperance?.......... 79
Air, Purity of Atmospheric.......... 336
Anatomical Injections, On a new Process for.......... 248
Animal Magnetism.......... 401
Arsenic, Prevention of Poisoning by.......... 255
Cattle, Epidemic among.......... 32
Circumcision as practised at Constantinople.......... 112
Cliniques.......... 320
Cliniques, Short Discourse on.......... 159
Coroner's Inquests, Fees at..........80, 111
Dental Surgeons, American Society of.......... 144
Doctors.......... 368
Do the Various Races of Men Constitute a Single Species? By Samuel Forry, M. D.....81, 97, 113, 129
Druggists' Stores on the Sabbath, Closure of.......... 16
Emigrant Vessels, Necessity of Surgeons in.......... 48
Emmet, Late Professor.......... 304
Foundling Hospitals, Institution of.......... 368
Galen, Some of the most important Discoveries of... 222
Hartford Retreat for the Insane.......... 15
Homœopathy.......... 238
Kentucky, Circular Letter to the Physicians of, on the subject of Medical Reform.......... 177
Literary Peddling and Piracy; or, A new way to gain Reputation as a Book-maker without Deserving it.. 110
Medical Convention of Connecticut.......... 32
Medical Convention of Ohio.......... 32
Medical Education..........63, 80
Medical Ethics.......... 64
Medical Public, to the.......... 64
Medical Schools of the West.......... 32
Medical Science of Missouri.......... 96
Medicine and Surgery in Montreal.......... 78
Medicine and Surgery in Quebec.......... 78
Medico-Legal Case.......... 367
New York City Hospital.......... 320
New York County Medical Society, Anniversary Meeting of.......... 48
Painters, Anatomy amongst.......... 174

Phthisis, Statistics of. 400
Premiums to Medical Students. 351
President of the College of Physicians and Surgeons in the City of New York. 240
Prizes, Award of. 96
Reform of Medical Education. 159
Smith, John Augustine, Dr., a Pen-and Ink Portrait of, from Nature. 175
Society for the Collection and Arrangement of Medical Statistics, and the Promotion of Medico-Chirurgical Science. 159
Society of Alumni of the College of Physicians and Surgeons of the University of the State of New York, Note from the President of. 304
Suicides by Laudanum. 63
Theory of Respiration. 228
Tooth-Drawing, Arrest of Bleeding after. 304
Typhoid Fever, M. Louis on. 254
Vaccination. 416
Weekly Report of Interments, 16, 32, 48, 64, 96, 112, 128 144, 160, 176, 192, 208, 224, 240, 304, 336, 352, 384, 416
Widows and Orphans' Fund Association. 256

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, JULY 2, 1842. No. 1.

LECTURES.

Dr. Mott's Lectures.

The concluding half of Prof. MOTT'S Lectures on Surgery, will, if our health and strength be spared, be given in our third volume—that is in the first volume to be issued next year. In the meantime, arrangements are in progress for the publication in our columns of several valuable courses of lectures delivered at the Philadelphia and Boston Schools.

A COURSE OF LECTURES

ON

Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XIII.

Hooping-cough — Pathology — Symptoms — Progress and Duration — Complications — Congestion of the Brain — Pneumonia — Pleuritis — Treatment of the Disease — Foreign Bodies in the Trachea and Larynx.

GENTLEMEN :—

I design to speak, on the present occasion, of that peculiar form of inflammation of the bronchi which is denominated 'hooping-cough' or *pertussis*. On examining a patient who has died of this disease, which seldom happens, you will witness no appearances except those indicative of the existence during life of acute inflammatory action. The mucous membrane of the bronchi is red, and an accumulation of mucus is present in the tubes. Not unfrequently we find the lungs congested, and also presenting evidences of inflammation. There is more or less effusion of serum, and the bronchial glands are enlarged. Breschet, the distinguished Professor of Anatomy, in Paris, states that in two of these cases, he found the pneumo-gastric nerve diseased, but subsequent observations in regard to this point have not confirmed his opinion. It would seem that the morbid change which he discovered in these cases was merely an accidental appearance, and had no necessary connexion with the pathological characteristics of hooping-cough. Again, we frequently find the bronchi dilated, and presenting that appearance which I have called 'fusiform.' This dilatation is acute, and usually takes place in the course of two or three months. These, then, are the principal organic changes which we notice in hooping-cough, but they are not enough to constitute a new form of disease different from that simple bronchitis which has been under our consideration. There must therefore be something specific in the disease to account for the difference in its symptoms. And what is it? With regard to hooping-cough, we know that it is dependent on some epidemic influence, wide-spread, and which, for want of a better term, we call, 'atmospheric influence.' We find that the disease appears to be contagious; and of another fact we are also certain, that is, of the frequent occurrence of great spasm in the bronchial tubes. It is a point pretty well settled that these tubes are supplied with a muscular coat, immediately under the mucous one; but if they had not, there is no reason why they should not be liable to spasmodic action. This presents another element, then, in the phenomena of this disease. But beyond this there is something of which we are as yet entirely ignorant. I said that patients seldom die of simple hooping-cough.—Still it is not uncommon for patients to die during the progress of this complaint; pneumonia or pleuritis may supervene and carry them off. Again, the disease often attacks children already debilitated by some previous complaint, such, for instance, as an affection of the mesenteric glands, or chronic inflammation of the mucous membrane of the intestine. When this state of things exists, the hooping-cough may prove fatal, not from its own violence, but from the additional exhaustion to which the constitution already weakened is subjected.

The symptoms of hooping-cough are these :—It commences very much like an ordinary catarrh, attended by a dry sonorous cough ; there is usually more or less lassitude, and some disposition to fever; the child loses its taste for play and becomes fretful and disturbed, and loses its appetite. These symptoms may continue for one or two weeks; usually at the end of the second week the characteristic symptoms make their appearance. The cough now begins to occur in paroxysms; the child seems during one of these fits to be almost on the point of suffocation; its face is red and eyes suffused; the jugulars are swollen ; and the respiration is, as I said, very much impeded, and just as the patient seems on the point of suffocation, a sudden and prolonged inspiration ensues followed by the characteristic hoop. The apparent effect of this is to relieve the patient, but the relief is only momentary, and the same thing is soon repeated, followed by another hoop, till finally the child vomits or coughs up whatever food may be in the stomach together with a large accumulation of thick transparent ropy mucus, and it is not until this is thrown off that the child gets relieved, and continues so till the occurrence of another paroxysm. Children are not usually seized unawares with these paroxysms; if you watch them you will observe that they endeavor to prepare for them, being quite sensible of their approach. The little patients endeavor to repress the first indications of the paroxysm; if lying down or engaged in play they suddenly start and seize a chair, or any person who may be standing or sitting near them. These paroxysms may be repeated three or four times in the twenty-four hours, or as often as every fifteen minutes.

If you examine the patient during one of these paroxysms, you will find nothing at all in the physical signs which you would expect. You certainly might suppose that when the characteristic hoop occurs with the long-drawn forcible inspiration, that the respiratory murmur would be distinctly heard over the lungs, but in truth it is not. The air does not enter the lungs. It does not appear to travel lower down than the first ramifications of the bronchial tubes. The spasm closes up the tubes, and prevents the admission of air. If you examine the child during one of the intervals between the paroxysms, you will discover the ordinary symptoms of bronchitis, more or less strongly marked—clearness on percussion—and fulness of the respiratory murmur, which is, you know, remarkably distinct in children when in a state of health. A slight sibilant ronchus or a little of the mucous rattle may be also heard, if the secretion of mucus be considerable.

Now during the progress of the disease, and when it occurs under favorable circumstances, there are no strongly marked symptoms. The child is, as I said, at first, somewhat feverish, the pulse is accelerated, the appetite impaired in some degree, but during the first or second week these symptoms gradually disappear, and the child becomes nearly as well as usual—the skin is cool—the appetite good—the patient presents no morbid appearances at all, except perhaps it may be a little more delicate than natural. The duration of the disease is pretty well fixed. In ordinary cases it continues about two months; at this period the cough diminishes in violence, the paroxysms become less and less frequent, other symptoms disappear, and gradual restoration to health ensues. But if during the period of improvement the child should be unfortunately exposed to cold, then the symptoms of the disease return, and in this way the continuance of the complaint may be prolonged for three or four months, or indeed to an indefinite period.

There are two complications which we notice in this disease, which are of vast importance. The disease, as I remarked, is not of itself attended with great danger, but when these complications occur it is exceedingly fatal. Therefore I wish to impress on your minds the great importance of making them the subject of your most careful and attentive study. During the paroxysms you will observe that the child's face becomes extremely swollen and livid, the jugular veins are much distended, the eyes are loaded with tears, and even blood will often gush from them or from the nose. All this shows that there is a powerful determination of blood to the brain, and you will not therefore be surprised to learn that congestion of the brain is a very common complication of this disease. If the child becomes sleepy, drowsy, and disposed to lie constantly in bed; if the arteries are beating more strongly than usual; if, in short, the ordinary symptoms of congestion present themselves, it is time to dread an attack of acute hydrocephalus, or coma, or convulsions. If, again, the patient becomes feverish, loses appetite, and the cough becomes suppressed and painful, then there is reason to apprehend the approach of inflammation of the lungs or pleura. And frequently, in examining the chest, you will find evidence of the existence of one of the latter diseases, which you have every reason to suspect, when the febrile excitement, sharp dry cough, and other rational signs of inflammation of the chest occur. You can easily conceive how dangerous and severe this inflammation of the lungs or pleura must be.—And here it is proper to advert to a circumstance which takes place in these cases, and by which you might readily be deceived. When pneumonia and pleuritis develope themselves in hooping cough, the characteristic symptoms of that disease disappear. The hoop is no longer present, and the paroxysms cease. This might, were you unaware of its cause, lead you into the fatal error of supposing the patient to be in a state of recovery. Recollect then that the absence of these characteristic symptoms is accounted for by the supervention of the new affection of the lungs or pleura.

Now let us proceed to the treatment of this disease. It is a principle generally admitted by practitioners that hooping-cough when occuring in a healthy subject and under favorable circumstances, requires little treatment and had better be left almost altogether alone. Common sense and prudence will dictate the appropriate treatment in such cases. The child must not be allowed to be out in the open air in damp weather; its diet must be carefully regulated, and the regimen be conducted generally on antiphlogistic principles. A farinaceous or milk diet is generally recommended, and is doubtless the best. Parents sometimes make a mistake in supposing that the child is most carefully guarded against the effects of cold by keeping it closely shut up. But this is an error. Children kept thus closely confined will contract cold on the slightest exposure; whereas children allowed to go out into the open air when the weather is pleasant, will not so readily suffer from undue exposure. Therefore I think that children should be exposed as freely as circumstances may admit. Besides this simple treatment nothing seems to be indicated, and these cases terminate favorably at the usual period.

But can we do any thing to moderate the severity of the spasm? A good deal can be done by the administration of stimulating expectorants. The common hive-syrup is a very valuable remedy in such cases. If on examination of the chest we find much mucous rattle or sibilant ronchus, the use of stimulating expectorants is clearly indicated, and will be found of great service. In other cases the affection seems to be more of a nervous character. There is a nervous irritation which produces predisposition to spasm, for you recollect there is a spasmodic element in the disease, and it is not uncommon for this element to predominate and render the paroxysms peculiarly severe. In these cases a variety of remedies, all of them belonging to the several classes of antispasmodics and sedatives, have been recommended. In the Children's Hospital of Paris, the oxyde of zinc has been very successfully used. Belladonna, and other vegetable sedatives, and prussic acid have been employed, and in many cases with advantage in moderating the violence of the paroxysm; but I do not know that these remedies have in any case operated in shortening the duration of the disease.

Suppose a case is protracted beyond two months—the period which I have represented as the usual duration of the disease—by the occurrence of catarrh, or other causes—what should you do in such a case? Tonics are indicated in such a case, inasmuch as the constitution of the child is necessarily much debilitated. Lettsom speaks in strongly favorable terms of a compound of bark and cantharides, which seems to be an appropriate remedy. The Germans, who have paid considerable attention to this disease, place much reliance on muriatic acid. I have met with a case in which the free application of garlic rubbed along the spine seemed to have a most beneficial effect. The internal administration of garlic is, by the way, strongly recommended by some, and if I recollect right, by Dewees amongst others.

But suppose that notwithstanding all our efforts, the disease goes on; then we have, I believe, at least one resource which is remedial—that is, change of air. This almost immediately stops the paroxysms. We have not yet learned the rationale of this treatment. We can readily conceive why a patient sent from the city to the country should recover more rapidly; but a patient with this disease sent from the country to the city, experiences an equally marked and favorable change—why? We cannot explain it; yet such is the fact.

I will now say a word or two, gentlemen, about the introduction of foreign bodies into the trachea, though you may perhaps be ready to say that this is to us rather a *foreign* subject, and belongs to surgery. But as the diagnosis in these cases depends in some degree on the assistance rendered by physical signs, I will venture to refer to them. Persons when eating sometimes become affected in this way by carelessness on their part, such as that evinced by their speaking when the mouth is full or the food is passing into the œsophagus. If the substance lodges in the larynx, as it sometimes does, especially if it be caught in the ventricles of the larynx, which are, you know, little hollow sacs, in which the substance may lodge, the most distressing symptoms ensue, and are followed not unfrequently by a fatal result. If the foreign substance travel a little further down into the trachea great irritation will also be produced, though not so immediately as in the case just described, but when it does, it will produce the most serious and alarming effects. A great deal of the character of the symptoms will of course depend on the size and shape of the substance. For instance, it has sometimes happened that a decayed tooth or a portion of one has in the process of extraction got into the larynx or trachea, and of course you can readily conceive that such a substance would create a great deal of irritation. Much also depends on the weight of the substance. Heavy bodies will sink down into the lower portion of the passage, whilst lighter substances keep moving up and down in the trachea, and create of course greater annoyance. Now it is very difficult to extract foreign substances from this situation, for you know that the epiglottis and vocal chords are placed there as sentinels, and they act just as efficiently in keeping foreign bodies in, as they do in preventing their introduction. Another thing which renders the extraction very difficult, is the circumstance that during the act of exspiration the glottis is never so open as during inspiration.

It is scarcely necessary to say that it is of very great importance to be able to ascertain the precise situation of the foreign substance before making any effort to extract it. And how can this be ascertained? If the substance be lodged in the ventricles of the larynx, there is usually a great deal of permanent irritation with great dyspnœa, and the pain and sense of stricture are referred directly to the larynx, although it is to be remarked that in some cases no marked pain is present. In such a state of things you have reason to believe that the foreign body is in the larynx. If there be severe paroxysms of coughing and dyspnœa, it is probable that the substance is in the trachea, and if you apply the stethoscope you may hear the foreign body striking against the sides of the trachea. In cases where the substance goes into the bronchi, it almost invariably goes into the right bronchial tube, and a knowledge of this fact is of great importance to the surgeon. The explanation of this is very simple and intelligible, when you recollect the difference in the disposition of the two bronchi at their origin.

[Dr. Swett here exhibited a preparation taken from a patient on whom Dr. Kearny Rodgers operated unsuccessfully. The foreign substance was a bean, and its position in the larynx showed the tendency which foreign bodies have to pass into the right rather than the left bronchial tube.]

If the substance be seated in the bronchus, of course there will be a cessation of the respiratory murmur in that portion of lung supplied by it, so that even at the first moment there can be little difficulty in such a case of ascertaining this important fact. There will be no dulness on percussion, for the air is plugged up there. But if the substance remain long, you will have the symptoms of pneumonia developed around the foreign body. You may in such a case have the mucous rattle, a crepitant rattle, bronchial respiration, flatness on percussion, all the evidences of pneumonia in fact, and at the seat of the foreign body you may at last have a cavity formed, and the patient die with an ulcer thus formed, after severe and prolonged suffering.

I became acquainted with the case of a young lady who died two years after a foreign substance had lodged in this situation and produced an abscess in the lung. In the post-mortem examination a portion of a blade of grass was discovered in this abscess, and which was certainly remarkable, *undissolved*. [A beautiful preparation from the Museum of the College, and taken from a young man whose death resulted from his swallowing a fishbone, which got into the larynx and produced ulceration, was here exhibited to the class.]

Into the treatment of these cases I cannot of course enter. Some who are not in the habit of operating think that they can trust to emetics. In some cases they may do, to be sure, but there is great danger that sudden death would be the result in others. The best thing is to divide the trachea fairly, and then in many cases the foreign substance will be forcibly expelled, and if not it can be extracted with forceps.

To-morrow, gentlemen, we will proceed to the subject of laryngitis.

REVIEW DEPARTMENT.

A Discourse: delivered upon the Opening of the new Hall of the New York Lyceum of Natural History. By John W. Francis, M. D., Member of the Wernerian Natural History Society of Edinburgh, late Professor of Materia Medica, &c. &c. 8vo. pp. 93.

We experience a feeling somewhat akin to shame for our remissness in neglecting till this time to notice this elegantly written and instructive *brochure*. No branch of science presents so varied and fascinating attractions, as that one, in whose behoof the erudite Professor so eloquently and feelingly discourses. Every where throughout the vast field over which he travels, the author seems at home; and every where the devout worshipper of the great First Cause is apparent. Seldom have we derived such unaffected pleasure from the perusal of any work as that which has rewarded us for the reading of this 'Discourse.'

The natural productions of the New World furnish our author's text, and with what nervous conciseness and graceful diction has he discussed it! We have no space for a formal analysis of the 'Discourse,' but offer a few random extracts, from which, however, our readers can readily perceive that we have not uttered unadvisedly the commendation which we have pronounced upon the merits of the whole performance.

We are not permitted to enter into an examination of the theories of Clavigero and Robertson on the intricate question as to the people by whom these vast regions were first inhabited. We assume the opinion as that best sustained by facts and reasonings, that the progenitors of all the American nations, from Cape Horn to the southern limits of Labrador, from similarity of aspect, color, &c., migrated from the north-east parts of Asia; and on like grounds we admit that the nations which inhabit Labrador, Esquimaux, and the parts adjacent, from their likeness to the American nations, and their resemblance to the northern Europeans, have been derived from the north-east part of Europe. Pennant has remarked, the inhabitants of the new world do not consist of the offspring of a single nation; different people, says he, at different times must have arrived there; and it is impossible to say that any one is now to be found on the spot of its colonization; while a distinguished philosophical writer of our own, Albert Gallatin, contends that even with regard to the Esquimaux, who seem to be characterized by some striking peculiarities, there is no solid foundation for the opinion of those who would ascribe to them an origin different from that of the other Indians of North America.

* * * * * *

The most casual glance over these extensive regions will bring to view the richest treasures for the consideration of the naturalist. For example, of the mammalia, the most remarkable fact which courts investigation, is the few species of that class which are common to both the eastern and western continents; and the many that are the appropriate inhabitants of the western: it is affirmed of the quadrumana, or handed animals, that about eighty-two species out of one hundred and eighty-seven are peculiar to America, not one of them being found in any other part of the world: of about one hundred and six carnivorous animals, well ascertained as peculiar to America, not one is known to exist on the eastern continent; and it is further stated, that all the mammalia which are common to the two continents, even to the extent of being considered as climatal varieties of the same species, belong to the northern parts of America, and almost all of them to the extreme north. It is a proverb with the medical faculty that every climate, while it has its own diseases, is also favored with its appropriate indigenous remedies. This principle of Divine harmony seems to be no less true with respect to the animals and the localities of a country. Some philosophers, as Glavigero, have affirmed, that the beasts of cold regions may have passed over the northern isthmus, which perhaps connected Europe, America, and Asia; while the animals and reptiles peculiar to hot countries passed over the isthmus that connected South America with Africa. Pennant was of the belief that all the animals of America were originally derived from the north-eastern quarter of Asia, to which they had previously made their way from Mount Arrarat: nor is this speculation rendered the less feasible by the reasonings of Capt. Burney, in his late paper read before the Royal Society, in which he inclined to the belief that Asia and America are not only contiguous, but parts of one and the same continent. But it is difficult to reconcile this theory with the distinctive forms of animal life and the physical characteristics of countries. Whatever may be the migratory capabilities of animals, few attend the peregrinations of man. While, however, we allow that the distribution of animals involves speculations of great complexity, and presents a problem which perhaps will ever be beyond the ken of human wisdom to solve, it is the imperative duty of the naturalist to collect every fact which can illustrate the characteristic localities of the innumerable species which constitute the animal kingdom, and trace the association of genera and species over the surface of the earth. Admitting, to its fullest extent, the interchanges of place which occur among animals by means of their migratory movements, whether accidental and irregular, or stated and periodical, and the complexity into which inquiries on this head are thus unfortunately involved, we, nevertheless, find to our entire satisfaction, that every country is characterized by various peculiar tribes, and many of them, although the farthest removed from what we consider as the central station in which all living creatures were originally placed, are naturally the worst prepared with the means of locomotion. Thus we find that the tiger, with his herculean strength, confines himself to the most beautiful of the Asiatic islands; the panther crouches among the branches of the African forests; the jaguar, of the new world, prowls along the wooded shores of the Orinoco; the moose deer roams amidst the primeval forests of the North American continent, and the gigantic cetacea gambol beneath the ices of the poles. The fur-bearing animals are principally confined to the regions of perpetual snow in Arctic America; and while it is ascertained that some are common to both continents, many, it is equally well known, are peculiar to North America. The musk ox is deemed to be an arctic quadruped, yet is it unknown both in Asia and Europe, while two races of deer and the prong-horned antelope are recognized only in America.—The Fauna Boriali Americana of Dr. Richardson, contains many illustrations of a similar sort. The zoological aspect of the northern parts of British North America, according to this intrepid and enlightened traveller, the companion of Captain Franklin in his late expedition toward the North Pole, is more allied to that of Norway and Lapland and some of the corresponding parallels of Asia, than to the southern parts of the new world. The equatorial regions of Asia, Africa, and America, possess no quadruped which is common to more than two of those regions, and it might be said that none of the three possess a single mammiferous animal in common. Melville Island, and the rest of the North Georgian group, may be affirmed as the most northern region to which our knowledge extends. In the more northern parts we have the polar bear, whose southern limits seem to be found at fifty-five degrees: as we retire from the north to the more southern latitude, we lose the musk ox and the icy hare. The distinguished explorer of Arctic Zoology has also thrown a large amount of information on the zoology of the temperate parts of North America. The bison may be found far south, probably in the thirty-fifth degree of north latitude. Its characteristic positions are the great prairies to the westward of the Mississippi, where it may be seen in droves of countless numbers. Lewis and Clarke mention several species of the cerous, canes, and ursus, as inhabiting the plains on the banks of the Columbia river. The Rocky Mountain sheep and goat are, upon good authority, conjectured to be peculiar, and to differ essentially from the argall of the north of Asia. We have still further illustrative proofs of the effects which local peculiarities produce on the zoological character of a country. According to Dr. Richardson, the moose deer and the American hare are met with at the junction of Peel's river with the Makenzie. The didelphis forms a genus, according to Cuvier, peculiar to America; and I conjecture that we have rational grounds to infer that the castor fiber, which is found in the most solitary parts of North America, is a species distinct from that of Europe, which seems not to possess or exercise the faculty of house-building. If such be the fact, we can promptly reconcile many conflicting accounts of the beaver. We may, moreover, justly boast of the mastodon as our exclusive property, whose size is greater than that of the elephant, and of heavier proportions, and, as once, an inhabitant of North America alone. The fossil skeletons of two edentata, of great size, have been discovered in America, the megatherium and the megalonyx. With the brilliant aids daily increased in this age of fossil zoology, I am yet disposed to receive with great allowance the remarks on this subject of an eminent writer, Dr. Lyell, in his work on Geology. The Siberian fossil remains which he has classified with the American mammoth, are a distinct and inferior animal from that of America, and truly a species of elephas, not mastodon. A too solicitous desire to establish a favorite hypothesis, has not unfrequently detached the best minds unwittingly from the path of a legitimate philosophy.—From the collected results of enterprising and intelligent travellers, it has been ascertained, with tolerable accuracy, that there are one hundred and forty-seven species of mammiferous animals in North America, eleven of which are fossils, and no longer occur in a living state, and twenty-eight of the cetaceous order. The remaining one hundred and eight are considered as American quadrupeds, and of these only twenty-one species are common to North America and the old world. Mr. Jefferson, more than fifty years ago, said, that of twenty-six quadrupeds common to both countries, seven are larger in America, seven of equal size, and twelve not sufficiently examined: that there are eighteen quadrupeds peculiar to Europe, and more than four times that number peculiar to America; and that the first of these, the tapir, the largest of animals peculiar to America, weighs more than a whole column of European.

* * * * * *

Our American rivers abound in individuals who have their like in the waters of Europe; and we have others exclusively our own. It is known that the fish of the Ohio and of other of our great rivers are peculiarly abundant both in number and species, and yet few seem to resemble those of Europe; and although the migratory attribute of many of the piscatory tribes renders it difficult to discriminate their natural locality, enough is understood to justify the assertion that we suffer not by comparison on this head. It appears that Lacepede, not many years since, described about two thousand fishes; and at this present time this number may be quadrupled. Baron Cuvier remarks that the amount of known fishes may be safely estimated above six thousand. Many of the fishes of our inland lakes have no superior for their rare edible qualities, and exist in quantities of surpassing calculation. If the fecundity of the New York waters be in any wise a criterion for determining the relative proportion of this extensive class for the United States, we may justly set down the amount for America in large numbers.

* * * * * *

The result of the latest investigations in ornithological science determines the entire number and varieties of birds at present ascertained throughout the world to be upwards of six thousand. The more southern climates exhibit the greatest riches in ornithology: thus it appears that in the Cape of Good Hope there are above one hundred more species of birds than are to be found throughout the whole of Europe. Great Britain and Ireland produce only two hundred and seventy-seven different kinds of birds, of which one hundred and forty-two are land birds, and one hundred and thirty-five water birds and waders. The species of Europe and North America have been classed under one hundred and seven genera, of which sixty-four are common to both countries; nineteen American, foreign to Europe, and twenty-four European, equally unknown in America.

* * * * * *

It is flattering to our pride, that the number of American writers who have entered on this attractive science, is already so great, To the first president of this Lyceum may be awarded, I think, the title of the father of American Geology: and it must ever remain a cause of regret, that he who seemed so peculiarly qualified to elucidate the physical structure of his native country, had not subsequently directed his copious intellect to a fuller exposition of our geological phenomena: I allude to the late Professor Mitchill, whose Sketch of the Mineralogical History of the State of New York appeared as early as 1797: an elaborate document of unquestionable excellence, and which, without due acknowledgment, has been freely appropriated by Volney and other travellers. In this paper, Dr. Mitchill employed the then popular nomenclature of Kirwan and Cronstedt, and advanced the opinion that the United States furnished indubitable proofs of volcanic formations, in which belief he has been sustained by facts in our own State, and by the decisions of several recent observers. Subsequently Dr. Mitchill, in his collegiate course of lectures, was almost an exclusive advocate for the doctrines of the Wernerian school, to which he yielded his conviction, from the great ability with which they were enforced by the celebrated Scotch Professor, Jameson, of Edinburgh. Our palisado rocks and some few geological occurrences in the south-western regions of the United States, constituted the prominent exceptions to the Neptunian theory, as taught by Mitchill: at least such was the case when I listened to his University instruction, in 1811. Another ardent disciple of nature, Mr. M'Clure, has also contributed to the American Philosophical Society, Observations on the Geology of the United States, with remarks on the probable effects that may be produced by the decomposition of the different classes of rocks on the nature and fertility of soils, the merits of which essay have been judiciously estimated.

* * * * * *

The mineral waters of the country attracted some scientific attention at an early day, and the observations on the constituents of the waters of the Virginia springs seem to have been the forerunner of a great number of the analytical expositors of other mineral waters found elsewhere. Humanity derives fresh aids for the exercise of her powers, by a closer study of these important remedial agents, from a practical investigation of their chemical and medicinal properties. Since iodine is found to exist in many of these waters, where it was least expected, a philosophical examination of our thermal and other springs becomes vitally interesting. This newly discovered medicine has wrought the most healthy influence on the goitre of the western country, since its introduction into practice in that section of the State, in 1823, and its value as a constitutional renovator is admitted by clinical experience. The waters of the mineral springs of Balston and Saratoga have for a memorable period been the heralds of their own virtues. Several of them are now deemed to possess iodine. The sulphurous waters of Avon, in Livingston county in this State, will, as their merits become known, be recognized for their potency and their sanative operation in a large class of physical infirmities. I apprehend that, as in most other sulphurous springs, iodine will also be found an important constituent in the composition of the Avon waters, and this herculean remedy can scarcely be over estimated.

* * * * * *

It is also impossible for us, on this occasion, to add much concerning our indigenous writers on American Botany, however meritorious they are. To the Bartrams, father and son, succeeded the Bartons, of Philadelphia; Bigelow, of Boston; and Elliott, of South Carolina, as most conspicuous by their respective publications. We may justly boast of several Floras of different States; that of Pennsylvania by Muhlenberg; the genera of North American plants, by Nuttall; the Flora of the Northern States, by Professor Torry; the Flora of Eaton; the Flora Bostonienses of Bigelow; the Flora Ludovica of Robins and Rafinesque, and the elaborate synopsis Fungorum of Schweinitz, who has treated as a master of the recondite mysteries of the cryptogamia. A list of the Plants indigenous to the State of New York was published by Jacob Green, in 1814 A Catalogue of Plants growing spontaneously within thirty miles of the city of New York, was given to the public by this Lyceum shortly after its organization. I ought to have mentioned elsewhere the paper of Professor Lewis C. Beck, on the geographical Botany of the United States, communicated to the Albany Institute, in 1828. Within a few weeks past, an admirable Compend of Botany has been favored the student by our fellow member, Dr. Gray.

An Investigation of the present Unsatisfactory and Defective State of Vaccination, and the several Expedients proposed for removing the now-acknowledged Defects of the Jennerian Practice. By THOMAS BROWN. 1842.

The pamphlet whose title we have just transcribed, appears to have excited a good deal of popular attention in England, and as we are occasionally called on in this hemisphere to combat some of the views which it promulgates,—we have thought that the following *critique*, which we find in a late number of the *London Medical Gazette*, would not be regarded as unacceptable.

The great, and indeed we may say the sole, defect of vaccination in the eyes of Mr. Brown is, that the security afforded by it is imperfect and temporary. To be worth any thing, according to Mr. Brown, the preservative power must be absolute and permanent. He will admit of no compromise. *Aut Cæsar aut nullus* is his maxim. Convict vaccination of failing in certain cases to afford this absolute and permanent security, and forthwith it should be abandoned. Mr. Brown enters into some details concerning the proportion of the vaccinated who, in after life, yield to the small-pox contagion, and he comes to the conclusion (p. 73) that 'above one-half of the vaccinated cases have already so yielded.' He then adds, 'when we consider that vaccination has not yet been proved by above one-half of the period of human life, it does not seem asserting to much to say, that unless some expedient can be contrived to render the anti-variolous powers more complete, the whole, or nearly so, of the vaccinated cases may suffer an attack of small-pox, and this not of the safest and mildest, but of the most severe and fatal nature.'

This, to be sure, is a sad picture of vaccine defalcation, and, if it were a faithful picture, we suspect that the eloquence of Mr. Brown would not have been needed to uproot the practice of vaccination. The common sense of mankind would have taught them the futility of the Jennerian practice, which, under such circumstances, would either have silently languished, or been authoritatively put down. The force of this argument is wholly lost upon Mr. Brown. He acknowledges, with some surprise to be sure (page 72), that the withdrawal of public confidence in vaccination 'has been delayed longer than he expected,' but he does not, or will not, see that this very delay should have suggested doubts as to the correctness of his data. Ample time has been given. Forty-four years have elapsed since the discovery of vaccination. Forty years after its general adoption in this country, the united voice of the empire, in Parliament assembled, declared itself so perfectly satisfied with the amount of the security that vaccination gives, that the inoculation of small-pox was declared illegal, the practice of vaccination throughout England and Ireland was placed under the direct control of the Government, and a tax levied for its support and encouragement. One would have imagined that this must have opened the eyes of the most bigoted. No! Mr. Brown declares the Vaccination Extension Bill of 1840 to be 'a disgrace to the profession in all its features.' He still adheres to his early impressions. Vaccination is not what it was first represented to be—a complete, certain, uniform, unvarying, permanent security against small-pox. It has not banished small-pox from among us, as we were fondly told it would undoubtedly do; therefore, *delenda est Carthago*:—Vaccination must be abolished, and inoculation again encouraged.

Mr. Brown's error consists in his fixed determination to view only one side of the picture. He is an advocate pleading in the cause, 'Inoculation *versus* Vaccination'—a prophet anxious to make good his own predictions, but he is no judge balancing nicely the arguments *pro* and *con.*, and arriving at length at a carefully drawn and practical conclusion.

That the merits of vaccination were largely overrated at the outset of its career, by Jenner and his followers, must be admitted. They undertook to prognosticate what would be the effects of vaccination under every possible contingency of age, time, climate, and constitution. They boldly announced its power of banishing small-pox from the earth, before it had even reached tropical countries, and ere a single black child had been vaccinated. They spoke of absolute and permanent security extending through the whole period of man's life, before vaccination had been known two years. This confidence of tone and manner had a wonderful influence on the early history of vaccination. It gave a powerful stimulus to the exertions of its friends and supporters, and materially assisted in fostering that rapid growth in public esteem, which is the great feature distinguishing vaccination from inoculation. How far its career would have been affected by a more cautious and philosophical announcement of probable results is a mere matter of conjecture. We apprehend that, in such a case, its early progress in public favor would have been much slower; but still, like inoculation, it would have advanced steadily, until, at the present period, the actual condition of the world with reference to vaccination would have been much as we actually find it.

That absolute and permanent security, for the possession of which the early vaccinators so loudly vaunted vaccination, and for the want of which Mr. Brown now as loudly accuses it, is not expected by the world at large. One swallow does not make a summer; neither do one, two, nor three hundred cases of small-pox succeeding to vaccination withdraw from the public mind its confidence in vaccination, provided that one, two, or more thousand remain secure, and the total amount of deaths and injury to eye and constitution inflicted by small-pox falls short of what it did in the days of our fathers. We recommend to Mr. Brown the study of statistics. The cleverest reasoning fades before the dispassionate results of figures in long columns. Small-pox exists, but it exists shorn of many of its worst features; and when it does invade the vaccinated, it is no longer the direful disease which our ancestors knew, and so justly dreaded.

While we thus blame Mr. Brown for the one-sided picture of vaccination which he gives, we do not on the other conceal from ourselves the injury done to a good cause by persisting in those confident announcements of the complete and permanent security afforded by it, which we still occasionally meet with in high quarters. It is quite idle at this time of day to indulge in such vain boastings. Small-pox occurring after vaccination has its pathological characters as clearly defined as small-pox in the unprotected. We hope, therefore, that in future it will not be thought necessary for the upholding of vaccination to over-estimate its merit, or to overlook its defects.

At page 4 he tells us, 'that if variolous inoculation had been made imperative upon the whole population, not only would the present dilemma have been avoided, but the only probable and possible way of resisting the ravages, and even extinguishing the existence of contagious small-pox, would have been the result.' Small-pox extinguished by inoculation! As the sentence stands it is absolute nonsense. Perhaps the author meant to say that inoculation universally practised would have banished epidemic visitations of small-pox. If so, he took a strange way of enunciating his proposition. But how this principle of universal and imperative inoculation could have been carried out puzzles us, for we learn, at page 60, that 'if inoculation is performed on the young, enfeebled, and exhausted, the disease will be uniformly either severe, dangerous, or fatal.'

Mr. Brown's practical hints concerning inoculation, and still more concerning vaccination, are too singular to be passed over in silence. He says, that while all measures are to be pursued calculated to render variolous inoculation mild, 'the opposite plan should be adopted in regard to vaccination, and every means used to make the phenomena of the vaccinated spot as severe as possible.' And how do our readers suppose that this is to be effected? To secure this most important object, says Mr. Brown (at p. 61), the virus should be allowed to become a little dried or viscid upon the lancet before it is inserted in the arm! Besides which, the vaccinated spot should be kept hot, and a slight irritation excited by temporary pressure! Such is Mr. Brown's mode of improving the practice of vaccination.

Mr. Brown propounds, at page 63, the strange notion, 'that cases of small-pox succeeding to vaccination have been in general confined to the lower classes of society.' We feel satisfied that this is a complete error. The upper classes have always had their fair share of the defects as well as the benefits of vaccination. We notice this error of Mr. Brown's the more willingly, because he couples it with a recommendation in which we perfectly coincide. 'Nothing can be a greater error,' says he, 'than the taking vaccinated children under ten years of age away from an epidemic small-pox, for, if they are to have it, they would then receive the contagion while the influence of the previous vaccination over the constitution is yet capable of mitigating the disease; whereas, later in life, when engaged in all the duties of social life, they may be attacked with small-pox, when the influence of the vaccine is either diminished or exhausted.' The good sense of these few lines will atone for much of the accompanying absurdity.

Mr. Brown takes up in succession the several modes which have been proposed for improving the practice of vaccination, and fortify the public mind in its behalf. Is is hardly necessary to say that he finds fault with all of them. He begins with revaccination; but having made up his mind that primary vaccination, with its more decided results, affords only a partial, feeble, uncertain, and temporary security, it is hardly to be wondered at that revaccination, with its imperfect phenomena, should be declared 'unworthy the confidence of any reasonable being.' He proceeds to the consideration of retro-vaccination, or the method of increasing the intensity of the vaccine virus by passing it again through the body of the cow. This, in the onset, without any inquiry into the facts, Mr. Brown at once sets down 'as the most unsatisfactory, unphilosophical, and unworthy expedient that could possibly be contrived, carrying inconsistency and contradiction on its very face. He has no hesitation in declaring, without laying claim to any experience in such an expedient, that it is only sporting with the good sense and safety of the public, and will be found a ridiculous source of further confidence.' These are hard words, but they are nothing more. M. Bonsquet has a beautiful series of drawings, showing the difference in the progress of the long-humanized vaccine virus, and the same virus improved in its activity by the process of retro-vaccination. The results are very striking, and no one, who has enjoyed the advantages of study at the Ecôle de Médecine, but must be sensible of the remarkable power which this expedient possesses. All this, however, goes for nothing with Mr. Brown.

It fares no better with Mr. Ceely and the new variolo-vaccine virus; or rather, we ought to say, Mr. Brown is more inveterate against Mr. Ceely than even against Dr. Jenner. His experiments on the inoculation of cows with the matter of human variola, are declared to be unpleasant and disgusting, because he made use of the mucous membrane of the vulva, instead of the cellular membrane of the mamma! Mr. Brown, however, in this part of the argument, impales himself on the horns of a dreadful dilemma. He declares that the variolo-vaccine, or the virus obtained by inoculating the cow with small-pox, can be none other than small-pox. Yet in the same breath he inveighs against the use of this very matter, and counsels a return to the practice of inoculation!

Antiquarian Notice of Leprosy and Leper Hospitals in Scotland and England. By James Y. Simpson, M. D., Professor of Midwifery in the University of Edinburgh.

A series of papers under this caption have appeared in recent numbers of that valuable periodical—the *Edinburgh Medical and Surgical Journal*, and are creditable in the highest degree to the industry and historical erudition of the accomplished author. We intend to extract some of the most interesting portions of these papers, and on the present occasion introduce to our readers Dr. Simpson's views on the

HEREDITARY TRANSMISSION OF THE LEPROSY.

Few facts in the history of tubercular leprosy seem to be more universally admitted by all writers on the disease, both ancient and modern, than the transmission of the predisposition to it from parents to offspring. The Greek and Arabian physicians considered it as a malady in which all the fluids of the body were equally diseased (corrumpens pariter omnes humores corporis.) Fit itaque (adds Haly Abbas, the well-known Arabian author of the tenth century, in his chapter 'De Elephantio,), cum humoribus spermatis corruptio, cum et humores et sperma ex sanguine fiant, in tantum, ut in generatione passio haec transeat in filios.' (Theoric, Lib. viii. cap. 15.) Avicenna and the later Arabian authors, with Theodoric, Lanfranc, and other European writers of the middle ages, express a similar belief in the hereditary transmission of the disease; and in the same spirit, our countryman Gilbert, writing, as we have already seen, in the thirteenth century, observes, 'Lepra est interdum morbus primus, sicut ex spermatibus primis matris et patris Leprosis. Sanguis enim corruptus interius, qui est nutrimentum foetus, corrumpit foetum.'

Amid the scattered fragments relative to the former history of leprosy in this country, it can scarcely be expected that we should have preserved for us any individual data bearing directly upon the transmission of the disease from father to son. I have met, however, with one notice, which, though imperfect, it may not be considered uninteresting to quote in regard to the present question.—In the burgh records of Glasgow for 1581, Patrick Bogle is ordered to be inspected for leprosy; and eight years afterwards, (1589) 'Robert Bogill, sone to Patrick Bogle,' is reported as an inmate of the leper-house belonging to the city.

It is unnecessary to adduce the opinions of modern authors in support of the occasional hereditary transmission of leprosy, as all observers who have described the disease from their own observations, and that in the most different and distant parts of the world, seem uniformly agreed upon this point. Dr. Heineken, in his account of the inmates of the leper hospital at Funchal, Madeira, in 1825, states that in three of the cases no hereditary taint was known; the aunt of a fourth (p. 21) was a lazar; the uncle and two brothers of a fifth (p. 18) labored under the same disease; the mother, brother, and son of a sixth (p. 19), were lepers, and all of them affected before himself; and in the seventh case (a female aged 35) her father, mother, three sisters, and two brothers had already all died of elephantiasis.

Among the seven cases of elephantiasis seen by Dr. Kinnin in the Mauritius, and so accurately described by by him in a preceding volume of this Journal, three were Mozambique slaves, and could give no satisfactory account of their parentage. Of the remaining four—the first could give no history of her father and mother, but had brothers and sisters in perfect health: the ancestors of the second patient had not been affected with leprosy, but her husband had labored under it for two years before death: the third case was a daughter of these parents, and one of her brothers had died of elephantiasis: the fourth patient appeared to have inherited the predisposition from the family of his maternal grandmother, who was never attacked herself, but who lost two sisters and three nieces by the disease.

These and other similar data show that the predisposition to leprosy, like the predisposition to other hereditary diseases, may occasionally show itself only in one or two individual members of a family; and may sometimes lie dormant for one or two generations, to reappear in a subsequent one. 'God and Nature,' says the reverend author of a description of the Faroe Isles, formerly quoted, 'deals wonderfully with such people (lepers) in their marriages, for amongst the children, they begat some clean and some unclean. It has also been taken notice of, that two living together in marriage, though the one be found infected, they live together as before, as long as one doth but murmur of it till the magistrate doth separate them, and yet the sound remaineth uninfected; whereas another is often taken with the disease by a very little conversation.—What is this? but that God confirms the truth of his word, taking pleasure in them that live in a just wedlock, and wander in lawful ways, putting their hopes in him, that neither fire nor water, contagious disease, nor dangerous pestilence shall hurt them.'

In some of the few districts of Europe in which cases of the disease have continued to linger down to a late period, the malady seems to be transmitted through an old hereditary taint in particular families, rather than generated by existing external circumstances acting on the bodies of those who now become its victims. The tubercular leprosy exists still, or at least existed lately in the districts of Martigues and Vitrolles, in the south of France. The cases, though very few, have still been well marked. M. Vidal, who, towards the end of last century, described several instances of the disease which he saw at Martigues states, that, with one problematical exception, the malady was in every case hereditary. 'May we not,' he adds, 'conclude from this, that, if the local causes which are generally assigned for leprosy be true, they have not, at least in our country, sufficient power to originate the disease, (la faire naître), but generally only to develope and perpetuate it in the descendants of ancient lepers.' The same family predisposition probably perpetuated the malady for some generations in the few cases that occurred in Shetland, in the latter part of the last century.—The case of the Shetlander, Berns, as mentioned in a preceding part, was an instance in which the disease was apparently the result of hereditary transmission from his ancestry.

The predisposition from hereditary constitution to leprosy, and some other diseases, was well known to our forefathers; and, if we place credit in the account of the 'auld manneris' of the Scotch antecedently to the reign of Malcolm Canmore, as 'compilit be the nobil clerke, Maister Hector Boece, Channon of Aberdene,' they were accustomed to practice hygienic measures that were assuredly more summary than humane, in order to arrest the diffusion of disease by such channels. For, to quote the words of Boece :—' He that was trublit with the falling evil (epilepsy), or fallin daft or wod (insane), or having sic infirmitie as succedis be *heritage* fra the fader to the son, was geldit (castratus), that his infekit blude suld spreid no forthir. The woman that was fallin Lipper, or had any other infection of blude, was banist fra the cumpany of men, and gif scho consavit barne under sic infirmitie, baith scho and hir barne war buryit quik, (if she conceived a child under such infirmity, both she and her child were buried alive.')

Third Annual Report of the Registrar-General of Births, Deaths, and Marriages, in England, with Appendices. Presented to both Houses of Parliament by Command of Her Majesty. London: 1841.

This is an exceedingly well drawn up and valuable document. We can only refer at present to one or two of the many interesting topics which it embraces, but will hereafter abridge some other portions of its useful details:—

DEATHS IN LONDON HOSPITALS.

Abstracts have been made of the causes of deaths in the London hospitals, namely—in the Charing Cross, St. George's, Middlesex, North London, Westminster, St. Bartholomew's, London, Guy's, St. Thomas's, Greenwich, the Dreadnought, the Fever Hospital, and the Small-pox Hospital. The number of persons who died in those hospitals within the year amounted to 2491, of whom 1729 were males, 762 females. Of 301 persons who died of erysipelas, 60 died in the hospitals. In many cases the erysipelas must have followed operations or accidents; and it will be observed that 390 of 1212 deaths by violence were registered in these institutions. 7 of 20 deaths from aneurism, 31 of 73 from hernia, 7 of 15 from diabetes, 10 of 27 from stone, 41 of 123 from diseases of the joints, &c., 7 of 21 from fistula, 4 of 7 from purpura, 51 of 368 from carcinoma, took place in the hospitals. Hospital relief is not obtained equally at all ages. Sick children remain at home under the care of their mothers; they would in general be refused admission at hospitals. The aged poor, with chronic maladies, go to the workhouses. Young persons without families, between the age of 15—30, often servants and immigrants from the country, resort in the greatest numbers to the hospitals, where 1 in 7 deaths at that age are registered.

DISEASES OF TOWNS AND OF THE OPEN COUNTRY.

Mr. Farr gives an unfavorable view of the health of towns. Thus the density of the country districts was to that of the towns as 10 to 245, the mortality as 100 to 144. The mean duration of life in the two classes of districts, differs nearly 17 years; it is in the proportion of 55 years (country), to 38 years (towns). The difference is greater than was given in the calculation founded on the facts observed in 1838; when the deaths in Bristol, Clifton, and Norwich were (by error) not substracted from the deaths in the counties of Gloucestershire and Norfolk. The mortality in the town districts, however, declined in 1839, more than the mortality in the country districts. As the population increases faster in the town than in the country districts, the difference in the mortality was greater than it is represented to be by these numbers.

The diseases chiefly incidental to childhood, are twice as fatal in the town districts as they are in the country.

The deaths, by several diseases of old age, were almost equally numerous in the towns and country. Asthma is, however, an exception.

The tendency to consumption was increased 24 per cent., to typhus 55 per cent. in the town districts; but as the absolute mortality from consumption is three times as great as from typhus in towns, and nearly four times (3·73) as great in the country, the excess of deaths by consumption, caused by the insalubrity of towns, is greater than the excess of deaths by typhus—a fact which has hitherto been overlooked. Thus, 24,094 deaths from consumption occurred in the country, 32,436 in the town districts; the excess amounted to 8,342 deaths; 6,402 deaths from typhus occurred in the country, 10,852 in the town districts; the excess amounted to 4,450 deaths. The difference is more correctly exhibited by a comparison of the mortality from the two diseases.

The facts show the propriety of the ordinary medical advice to place persons of a consumptive habit in a pure atmosphere; but they militate against sending them to reside in the continental towns, in many of which the mortality is as high as it is in Bethnal Green and Whitechapel. Paramenia (mismenstruation), though rarely fatal, is a very common disease, and one which greatly embarrasses the medical practitioner. The facts in the table point out the utility of the country watering-places to patients afflicted with the complaint in cities. The excess of deaths by childbirth in the town districts is striking. Out of nearly the same number of deliveries, 909 mothers died in the country, 1,560 in the town districts.

We are glad to perceive that the mortality in the whole of the metropolis—but particularly in Whitechapel and the worst parts—had decreased in 1839. The Weekly Tables up to the middle of 1841, show also a progressive amelioration; which may be expected, *cæteris paribus*, to proceed much more rapidly, when the new streets and park shall be opened, and when the sewers, and streets, and the dwellings of the poor are placed in circumstances which will secure more cleanliness and a moderate supply of pure air. The causes of the excessive mortality of towns are well known, and it cannot be too frequently repeated, that they admit of removal to a great extent.

Mr. Farr goes on to remark that the mortality increases, *cæteris paribus*, as the density of the effluvial poison generated in cities, and not strictly as the density of the population. The indigence of the inhabitants, or an insufficiency of proper food—even when not carried to the extent of starvation or famine—has also a decided effect on the production of effluvial poisons, as well as on the tendency to diseases of every kind. Hence the mortality is not always greatest in the densest parts of cities.

This principle explains the facts that, although the mortality is increased 44 per cent. by the present condition of the towns in England,—where the proportion of the town population is greater than in any other country in Europe, except Belgium,—the mortality of the nation has been much below the average during the whole of the present century; and, up to the present day, the expectation of life remains higher in England than in the rest of Europe. The industry and intelligence that have created flourishing towns have ameliorated, though not so rapidly as they might have done, the sanitary condition of the people.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, July 2, 1842.

Medical Education.

Reasoning after the manner of that persevering widow in the parable, we are determined, even by our very importunity, to excite our brethren to awake from their culpable supineness, on the great subject of medical education. We briefly sketched in our last number, the outlines of a plan for the extension of the college curriculum, and the approximation of our system of education to that of the medical institutions of Europe. But in whatever manner, and to whatever extent the collegiate course of instruction be enlarged, we wish to be understood as maintaining, that the possession of requisite qualifications should be the only avenue to the attainment of professional honors, and the right to practise. The limited nature of the course of study at present prescribed by our existing medical institutions for their students, is not the only objection to be urged against them. Their whole system of training—if training it can be called—is defective. It is something worse and more dishonest than mockery, to say that our medical students are *taught* the several branches of science, with which the public is expected to believe that they become thoroughly acquainted. The best and most intelligible exposition, of the value and efficiency of the system so generally adopted, is afforded at the bedsides of the luckless patients of the great majority of our newly-fledged practitioners. But on whose heads does the solemn and fearful responsibility rest? Assuredly, it chiefly reposes on those institutions which pretend to confer on their alumni that education which is to fit them for the safe and honorable discharge of the momentous duties of their profession; but who, with a mercenary, selfish, sordid spirit, which no language can too strongly condemn, have sacrificed science, humanity, and the best interests of the profession, to their own petty ends of pecuniary profit and advantage.

We well know, that to the performance of no easy task, are the genuine friends of medical science now invited. It is a hard matter to enter into competition with old-established institutions, and to encounter prejudices and interested opposition in every form, and overcome all the obstacles which are thrown in the way of innovating reform. But the work of elevating the standard of medical education in this country, and placing the members of the profession in that elevated position to which they should aspire, is a work which, despite of all lets and hindrances, *must* be successful, and the men who first engage, heart and hand, in it, will cover themselves with unfading glory.

New York,—the chief city of the New World,—we have already pointed out as the appropriate birth-place of this great national movement. All the elements of such an undertaking are here,—master-spirits only are wanted, who will come forward to combine them and give them the wished-for bearing. Not a hungry band of mercenary speculators, with words of hope and promise on their lips, and self and falsehood in their hearts,—not bronzed and bloated pretension to the skill and science of a public teacher, whose appropriate and most smarting chastisement, is the literal exposition of its *sayings*,—not the honor and morality of convicted plagiarism,—not the 'flying stationers' of vulgar charlatanry,—not these are wanted. But we want men of talent and rectitude, and moral influence,—men who regard the sacred obligation of a promise, and who will faithfully fulfil their every pledge,—men who really love science with no Judas Iscariot love,—men worthy, in fine, to assume the elevated and responsible position, which belongs to the guides and instructers of those to whom the comfort, health, and lives of their fellow-beings are entrusted.

The voice of enlightened public opinion proclaims, in no doubtful tones, that the present is an auspicious period for entrance on this work. It requires no great skill in the right interpretation of the signs of the times, to perceive that the day when the members of our profession could wrap themselves up in convenient and friendly mystery, has past away. The merits of professional men are beginning to be better understood, and therefore more justly appreciated. Chemistry, physiology, comparative anatomy, and kindred branches of medical science, are now taught in our common schools; and we will venture to say that boarding-school misses could be found, who, on these subjects, could puzzle some of the venerable, gray-bearded physicians of our acquaintance. Does not the position which the members of the profession as a body, occupy in the public estimation, afford abundant and most humiliating proof, that the general opinion is, that their education has been defective? But does this not teach us also, that any well-directed, sensible, and energetic movement in the cause of educational reform would be sustained by the public? What parent or guardian is there, who, with an enlightened regard for the interests and future prosperity and success of the youth under his care, would hesitate one moment as to the propriety of placing him in an institution conducted on the principles for which we are contending, in preference to one on the present inefficient system? What youth arrived at the years of discretion, would have any difficulty in making the same decision? And in what broad and glaring characters would the contrast, between the two systems, be presented to the public discriminating eye?

Let us hope, then, that the time has come for this revolution in our plan of medical education, and that a movement will immediately be commenced which will eventuate in the elevation of our profession from its present degradation, and render an American diploma, both at home and abroad, what it ought to be,—an unimpeachable passport to professional respectability.

The Widows and Orphans' Fund Association.

We learn with unaffected regret that the scheme for the organization of this society is threatened with failure. About one hundred subscribers only have been as yet obtained, and in such circumstances, the committee do not, of course, feel justified in taking any steps towards the organization of the society. We hailed the first intimation of this movement in the sacred cause of benevolence, with pleasure, and although some features of the plan appeared to us capable of revision and amendment, and a little inconsistency in the conduct of the Committee was visible, yet we were ready to lend with cheerfulness our humble aid in promoting the noble objects of the contemplated association.

We do trust that this enterprise,—undertaken we are well assured by the principal propounders of it, with motives of the purest and most laudable character,—will not be allowed to fail. That an institution of the kind is much wanted, we all know, and that under proper and approved treatment, it would attract the warm sympathy of every heart, cannot be doubted. Let the subscription-lists then be promptly filled up—let all our brethren come forward and pledge their cordial and efficient support to the undertaking—and then, when a sufficient number of names have been obtained, let a public meeting be held—rules adopted and officers appointed which will meet general approbation. Let it be understood that those who now subscribe are not pledged to the plan of organization presented, or officers nominated at the meeting held some weeks since, but that the founders of the society will be, those who now come forward and afford a guarantee that the enterprise can be commenced with rational prospects of success,—and that their united wisdom and intelligence will dictate the rules for future management, and appoint the officers requisite to carry these rules into execution. If the affair be now pursued on these liberal, just, and comprehensive principles, we would fain believe that the widow and the orphan will not appeal in vain,—that the voice of common prudence and self-interest which speaks so loudly and so feelingly, will receive very respectful and attentive audience,—and that ere long our great metropolis will in this, as in so many other works of mercy and labors of love, present a captivating example to the hundred cities of our land, and lead to the establishment of many institutions, which will, to remote generations, be the instruments of shielding from the bitter blast of adversity, those for whom the Infinite Benevolence himself has so repeatedly and tenderly expressed his peculiar solicitude, and on the efforts for the promotion of whose temporal welfare, He has promised such a copious outpouring of that blessing which alone maketh rich.

Castleton Medical College.

We have received the last annual announcement of this institution. During the past session seventy students were in attendance, and at the close of the term nineteen gentlemen received their degrees. The anatomical department of the museum has been greatly enlarged, by the purchase for the use of the college of Professor M'Clintock's extensive private museum. Since the last term, a very large collection of chemical apparatus has also been purchased for the college, and the museum of this department has been much augmented by the deposit of Professor Carr's collection, containing over 3,000 specimens, being, it is said, the largest and most perfect collection of *organic remains* in New England. A reading room, supplied with newspapers, medical and other periodicals, will next session be open to members of the class, subject to proper restrictions, free of expense. We readily bear testimony to the zeal that the Faculty of this school,—which has recently received no inconsiderable accession in the persons of two of our fellow-citizens,—exhibit in endeavoring to make their course of instruction as useful as the limited time devoted to it admits.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Thymic Asthma.

BY BENJAMIN DENNIS, M. D., OF CINCINNATI, OHIO.

As there are many highly respectable practitioners who deny the existence of thymic asthma, the following case, which was supposed to be one of that kind, and was treated as such, may possess some interest.

In the latter part of December, 1839, I was called to see a child aged 15 months, son of Mr. C. of Walnut street, who, according to the unsatisfactory history of the case, as gleaned from its mother, had been for the five previous months troubled with difficult respiration, continual wheezing, and occasional attacks of dyspnœa with threatened suffocation. Up to the time just mentioned, the child had been favored with uninterrupted good health, but now, in consequence of the duration of the malady, it was greatly emaciated—reduced almost to a mere skeleton. The attacks of dyspnœa occurred four or five times during twenty-four hours, and each of them created the most fearful alarm concerning its termination.

Having never before witnessed a case of thymic asthma, nor read much relating to its true character, I did not suspect the presence of that affection, but was disposed to regard the case as one of simple asthma. In this error I was not alone, as five other medical gentlemen who had visited the child before I was consulted, had arrived at the same conclusion. With this view the usual remedies applicable in the cure of asthma were prescribed; but perceiving no improvement in my little patient, I suspected that the difficulty might be the consequence of elongated uvula; upon an examination, however, this proved not to be the fact. I then determined upon a consultation.

January 10th, 1840. Visited my patient in consultation with Prof. J. P. Harrison, who, after instituting a careful inquiry into the history of the family, thereby ascertaining that they were predisposed to scrofulous affections, suggested to me that the case was one of thymic asthma. We immediately proceeded to examine the gland, which was found greatly enlarged, producing a very marked projection of the superior end of the sternum; it extended itself superiorly to the thymoid gland, and laterally to about half an inch beyond the sternal extremity of each clavicle. The following prescription was agreed upon :—

℞ Iodine, ℈j.
Hyd: Potassæ, ℈ij.
Aqua distillat: ℥j.
Fiat solutio.

Two drops to be given in a tea-spoonful of sweetened water, three times a day.

The parts over the gland were directed to be rubbed three or four times a day with salt water.

This course, attended with a gradual improvement in the health of the patient, was continued for two months, increasing the dose of the iodic solution one drop each successive week, and substituting the ointment of iodine for the salt water.

A small portion of calomel and rhubarb, a grain of each, was prescribed at occasional periods, when the state of the bowels rendered it necessary. Plenty of fresh air and plain, but nutritious diet, were also advised.

The gland continued to diminish in size, and at the expiration of three months from the time of our visit, the health of the little sufferer was apparently completely re-established.

In February last, I was informed through a friend of the family of Mr. C., who is now living in Illinois, that the child had had no return of the affection, and that his health was uniformly good.—*Western Journal.*

Case of Strangulated Hernia.

BY DRS. L. AND H. H. LITTLE, OF BEAVERTOWN, OHIO.

John Iliff, æt. 70, had an inguinal hernia of forty years' standing, which had been frequently strangulated and reduced by different practitioners; had usually worn a very badly constructed truss.

The hernia became strangulated on the 12th of August, 1841, and on the thirteenth we were called. All attempts at reduction, by the taxis, proving abortive, an operation was proposed, but not consented to till late on the 15th, when we proceeded to operate. Nothing uncommon occurred till the hernial sac was exposed, which was found to be near the size of the testicle of a horse, and presented nearly the same sensation to the touch, though rather harder. It resisted every attempt at elevation or separation from the intestines. A section was now determined on, and the only practicable method was the introduction of a tenaculum through its substance, when the whole tumor could be a little elevated by an assistant. The sac was opened by a careful dissection, which proved to be an inch and a quarter in thickness, composed of condensed cellular tissue. This thickness of the hernial sac gradually diminished as we approached the stricture, which was, however, much thicker than usual. The bowel was returned with difficulty, but the patient rapidly recovered. This singular condition of the hernial sac we believe to have been produced by harsh and oft-repeated attempts at reduction, from time to time, during the existence of the rupture, which had been strangulated a great number of times, and reduced, either by the patient or his friends, without the aid of a physician. We may also remark, that the sac contained little or no fluid, and much caution became necessary to avoid wounding the intestine.—*Western Lancet.*

Worms in Kidneys.

Although frequent mistakes have been made by describing, as worms voided with the urine, portions of albumen and of coagulated blood, or the larvæ of insects which had been accidentally in the urinal at the time of making water, there is now no doubt that, in a few instances, worms have really been discharged from the urethra. Three kinds have been observed—the strongylus gigas, the spiroptera hominis, and the dactylius aculeatus. Besides these, intestinal worms have occasionally been known to make their way into the urinary passages, and to be voided with the urine.

The strongylus has been found not only in the human subject, but also in the kidneys of the dog, the wolf, the horse, and the seal. Ruysch says: 'in renibus humanis semel eos me vidisse memini, quales in canum renibus longe frequentius occurrunt.'

One of the most curious cases is related in the Journal of Medicine and Surgery for July, 1758. A child, nine years of age, who had been cut for calculus four years before, was suddenly seized with retention of urine, accompanied with most severe pain in the right loin, numbness of the thigh on that side, hiccup, vomiting, &c. He was bled, put into a warm bath, had an anodyne lavement, &c. Not more than a small cupful of thick turbid urine came away by the catheter. The active symptoms continuing, the bleeding, &c. required to be renewed; the urine was still very scanty and deep-colored, The right loin now became puffy and swollen, and at length a feeling of fluctuation was indistinctly perceptible in the part; the patient having previously had repeated attacks of shivering. After the use of poultices had been continued for some time, a deep incision was made upon the most prominent part of the swelling: a large quantity of pus, mixed with sanguineous shreds, flowed from the opening. The discharge continued for some months; during several weeks it was tolerably healthy, but afterwards it became thin and ichorous. A variety of means were tried to improve its character, and to induce the healing of the wound; but every thing seemed to fail; and the surgeon recommended that nothing else should be done, except to keep it clean, and apply any mild application to it. Some months after he was surprised to find that the wound had entirely healed, although the patient's general health was by no means re-established. But this state of things did not continue long; for again he was seized with retention of the urine, accompanied with excessive pains, and an insupportable sense of weight in the loins. On examining the wound, the surgeon felt a fluctuation upon pressure; an incision was made, and a quantity of purulent matter discharged, with immediate relief to all the distressing symptoms. Once more the wound healed; and some time afterwards a similar train of suffering supervened, and was relieved in a similar way. The urine was sometimes purulent, and almost always more or less filamentous. The fistulous ulcer had now continued, with occasional closures, for nearly three years, when the surgeon, suspecting that the excruciating pain which his patient suffered, and the frequently recurrent attacks of ischuria proceeded from the lodgment of a small calculus at the bottom of the wound, proposed that a deep incision should be made in hopes of extracting it. Before this was assented to, the mother of the boy was surprised to find one evening a living worm in the wound; she drew it out with her fingers, and fortunately preserved it. It was about five inches long, of a greyish color, and as thick as a common quill. A second worm, rather shorter and smaller than the other, was extracted by the surgeon himself in the course of the following day. Two days later, the boy was suddenly seized with ischuria; and, as there was much distention and pain in the hypogastrium, it was suspected that the bladder must be full of urine. On attempting, however, to introduce a catheter, a complete obstruction was experienced at the cervix. After several ineffectual attempts to get it into the bladder, the boy was put into a warm bath; but, while in it, he was seized with such violent convulsions, that it was necessary to take him out. Judge of the surprise of the surgeon, who was about making another attempt to pass the instrument, when be observed at the opening of the urethra a foreign substance, which, upon being drawn out, proved to be a living worm, similar in size and appearance to the first one that had been taken from the wound. In the course of the following night, another worm was discharged from the urethra. From this time the ulcer in the loins began to discharge less and less, and gradually healed up. The urine, which now recovered a healthy appearance, occasionally contained filaments and membranous shreds, which were perhaps the debris of the cyst in which the worms bad been contained. The boy was ultimately restored to perfect health.

Another remarkable case is related, in which an abscess made its appearance in the lumbar region and burst. It did not shew any tendency to heal, and the patient gradually became hectic and at length died. It is mentioned in one part of the report that, after taking some brisk purgatives, the woman had passed a dozen of worms—the kind is not stated. On examining the abdomen after death, it was found that the right kidney had become united to the liver; on cutting into it, there was discovered not only a large calculus imbedded in its substance, but also three living worms—each of them about three and a half inches long.

The number of worms which were passed in the extraordinary case related by Mr. Lawrence, in the second volume of the Medico-Chirurgical Transactions, is estimated at between 800 and 1000: they were of the sort which has been called spiroptera by Bremser and Rudolphi.

Mr. Curling, assistant-surgeon of the London Hospital, has recently published a case of a girl who voided from the urethra a number of entozootic worms, not hitherto described, with an account of the animals in the 22d volume of the same work. Mr. C. proposes the name of Dactylius aculeatus for this species of worm.—*Traité des Maladies des Reins.*

Reduction of a Congenital Dislocation of the Humerus at the end of Sixteen Years. By Dr. Gaillard.

The head of the bone was thrown backward into the infra-spinal fossa of the scapula. The reduction was accomplished very gradually, by means of the pulleys, at several sittings, of about twenty minutes each, and did not occasion much pain. Great difficulty was experienced in maintaing the bone in its place, as every muscular movement threw it out again, when however it was easily reduced again. Considerable pain and irritation followed the attempt to maintain the parts in situ by position and bandages.

The cure occupied several months by reason of the pain and swelling, but was eventually complete; and the author, seeing the patient two years after, found the head of the humerus maintained in its proper situation, and that all the normal movements of the extremity could be executed.—*Memoires de l'Academie Royale de Médecine.*

Ligature on the Common Carotid Artery, for an Erectile Tumor of the Orbit. By M. Jobert.

M., æt. 60, came to Paris to consult the leading medical men, respecting a pulsating tumor, which, from being scarcely visible, increased in a few months to the size of an egg, and mounted up from the orbit on to the frontal bone. Insupportable pain attended every movement of the eye, while vision on that side was destroyed. All remedies having proved ineffectual, it was determined to tie the right common carotid artery. Immediately after the application of the ligature, all pain and pulsation ceased. The wound healed by the first intention, but the ligature, detained by the cicatrix, did not come away for a month. The eye which had projected now returned within the orbit, and its various movements were performed without pain or limit. Little or no pulsation was perceptible in the arteries of the face on the right side, but on the left side they were anormally developed, while the healthy eye was unusually brilliant.

In this case, and in another which occurred to the author, no *cerebral* symptoms supervened upon the ligature of the common carotid: but, finding a great discrepancy of opinion in the works of various writers upon this point, he instituted several experiments upon animals. The result of these was, that the tying the carotids was followed not by the production of cerebral mischief, but by the indication of a true pulmonary apoplexy; and, moreover, that this operation might be performed with impunity upon the dog, sheep, rabbit, and calf, but was fatal in the *horse*. In this animal, the vertebral arteries, large on entering their osseous canal, become almost filiform before penetrating the cavity of the cranium; and thus, after the ligature of the carotid, the blood not passing to the neck, head, and brain sufficiently freely, large apoplectic congestions of the lungs are formed. Bleeding, prior to and subsequent to the operation, was found to diminish the gravity of its effect, and M. Jobert suggests, that in strong men, depletion should be resorted to, to prevent any pulmonic stasis.—*Ibid.*

Aneurism at the Origin of the Left Carotid treated by Ligature on the Distal Side. By M. Colson.

F. Jaunet, æt. 63, applied for a pulsating tumor projecting below the left clavicle. A ligature was passed around the left carotid on the distal side of the aneurism with some difficulty, as the tumor thrust the axis of the vessel between the transverse processes of the vertebræ and the posterior border of the sterno-cleido mastoid. The same evening, some feverishness being present, 12 ozs. of blood were abstracted, and this was repeated the next day, making the fourth venesection, as she had been bled twice prior to the operation. She went on well for several days, with the exception of the wound, which yielded pus of a serous quality. On the 20th day, a slight transudation of blood proceeding from the wound, and some fever being present, she was bled for the fifth time, and the blood taken was buffed. On the 28th day the ligature came away easily. On the 48th day another slight hæmorrhage and a sixth venesection. After this she went on well, and was about to be discharged cured, when a rapidly destructive ophthalmia attacked the left eye and vision was lost; 75 days after the operation the wound closed. About this time the woman fell down, and an increase of size and violent pulsations were perceived in the tumor; inflammation and threatening of abscess followed, but were soon relieved. Six months after the operation she was considered as cured, being relieved of all urgent symptoms, although a large swelling and considerable pulsation remained.

This Mr. Colson states to be the thirteenth case on record in which the operation of Brasdor (the placing the ligature on the distal side of the aneurism) has been performed, and only the second instance of cure, the first being a case treated by Bushe. But surely it is premature to pronounce this case, operated upon in January as cured in July.—*Ibid.*

Use of Compression in Mammary Abscess.

BY MM. TROUSSEAU AND CONTOUR.

In this memoir there are two distinct parts; one devoted to the description of abscesses of the breast, the other intended to recall the attention of practitioners to a curative means too much neglected in their treatment, namely, compression. The following is the mode in which it is to be applied:—It is to be accomplished by strips of plaster, broad, and sufficiently long to go several times round the body. The surgeon, standing by the side of the patient, must first fix one of the extremities of the strip to about the middle of the back, then carry it towards the side of the chest, then pass it over the breast, beginning from the lowest part, then obliquely from below upwards to the outer third of the clavicle on the healthy side, and then obliquely downwards across the back, so as to cover the extremity of the slip already fixed. Following this course several times, he must take care that the portion of the band applied each time covers the two upper thirds of the preceding turn. But it is easy to see that if the bandage is always carried in the same direction, the breast cannot be completely covered; and that, on the other hand, as its several turns go across the clavicle of the healthy side, the movements of the shoulders would tend to displace it, and the lower part of the breast might soon be uncovered. Other strips of plaster are therefore applied, which, proceeding from the anterior and upper part of the abdomen, ascend, crossing the first obliquely; then pass under the axilla, and return, after passing over the posterior part of the chest, to the part where they were first applied, and then are carried again along the same track, covering each time the two upper thirds of the strip last applied.—The breast is thus completely covered by the bandage, which is prevented from rising by this last described, which ought to cover only the upper part of the breast.

To compression thus employed the authors attribute many advantages. In the first place, it immediately relieves the pain; it combats and diminishes the inflammatory engorgement, at whatever period it is applied. When employed after opening the abscess, it decidedly favors the evacuation. And although when employed too long, at a period when the process of suppuration is active, it might have the disadvantage of making the pus extend over a larger surface, yet this may be avoided by removing the bandages at a time when it is probable that matter has fairly formed. If this be done, and the abscess opened, the bandages may be again applied, after two or three days poulticing, with good effect.—*Lond. Med. Gaz.*

Modification in the Operation of Depression for Cataract.

BY JOHN MORGAN ESQ., SURGEON TO GUY'S HOSPITAL.

Mr. Morgan makes the following observations on this subject, in the course of his excellent lectures now being published:—

I have more than once performed a modification of the operation for depression, which I believe to be new; it is one applicable only to those cases of cataract which occur in combination with disease of the vitreous humor. The first case in which I adopted the plan to which I allude, was that of a lady, a patient of Mr. King, your demonstrator of morbid anatomy, who was the subject not only of cataract, but was also affected by synchysis, a disease which consists, as you know, in a melting down, or softening, of the vitreous humor, so that the consistence of this part becomes almost fluid. Now here, of course, extraction was out of the question, for a section of the cornea would have allowed the exit of, perhaps, the whole of the contents of the globe. I tried the operation for depression, but found that in consequence of the very great change which had taken place in the vitreous humor, the lens, after repeated attempts to keep it depressed, instantly rose to its former place. I then attempted the operation for solution, but as the cataract was hard, and apparently insoluble, no benefit was derived from this procedure. Well, gentlemen, as the ordinary means of relief had failed, or were impracticable, and as I could not, by the plan which I proposed to myself, make bad worse, I determined to try a new method of practice. I thought that although while the parts were in situ, the buoyant power of the vitreous humor might, in its more fluid state, defeat the desired object of the operation in the manner I have described, yet, that it might be possible, by tapping the globe through the sclerotic, so as to evacuate a portion of that humor sufficient to sink the lens below the axis of vision,—I thought I say that by such a mode of proceeding, a permanent depression of the cataract might possibly be effected, by the newly-formed secretion collecting more readily above it, than immediately below, in consequence of the presence of the lens in the lower part of the humor.

The operation I performed was as follows:—the patient was held as in the operation for depression; I then passed a large-sized needle with cutting sides through the sclerotic, about three lines distant from its junction with the cornea, a little below its transverse diameter, and as soon as the point had passed about an eighth of an inch into the globe, I drew its cutting edges vertically downwards, making in this way an incision, paralled with the corneal line of attachment of the sclerotic, and of about a quarter of an inch in length; a small portion of vitreous humor now escaped, but not sufficient for my purpose; I therefore made gentle pressure upon the globe, until enough had been pressed out to sink the lens below the pupil; I think nearly one-fourth of the humor must have escaped: after the operation, a piece of linen kept constantly moist was applied over the lids—the head and shoulders kept raised, and the patient placed in a darkened apartment; on the following day, the globe had nearly recovered its size and form, the wound was uninflamed, and no more uneasiness or pain was complained of, than what usually follows an operation for depression; the pupillary aperture was perfectly clear. No subsequent excess of inflammation followed, the wound in the sclerotic healed kindly, the lens remained depressed, the globe recovered its natural appearance, and vision was so far restored that the patient could read moderate-sized print with the aid of glasses. I have since performed this operation twice; in one case with success, the other terminated unsatisfactorily; in both of these cases I used Beer's cataract knife, which answers the purpose better than the needle.—*Provincial Med. and Surg. Jour.*

Phthisis Pulmonalis, with a Fistulous Opening in the Parietes of the Chest.

The following case, exhibiting a very rare complication of phthisis, deserves the notice of the pathologist.

A man, 38 years of age, and who for a length of time had been extremely subject to attacks of catarrh, was seized in May, 1839, with pneumonia; this yielded to active treatment, but there remained behind a dry cough, and a feverish state, accompanied with frequent chills. In the beginning of July, a phlegmonous swelling made its appearance immediately below the right mamma; it gradually increased in size, and, as a fluctuation became distinctly perceptible, an opening was made into it and gave issue to an enormous quantity of a purulo-sanguineous fluid of a suffocating odor. This discharge continued night and morning usually to the amount of three or four ounces; the opening was situated between the fourth and fifth ribs.

For three weeks there was no reason to believe that a communication existed between the outward orifice and any of the bronchial tubes; but, on the 20th of August, it was observed for the first time that air escaped with a bubbling noise during the act of expiration, and when the patient coughed or spoke. It was easy to trace, by listening to the direction of the cavernous souffle which was very distinct, the course of the fistula inwardly. The pectoriloquy also was so loud that it seemed as if the patient spoke directly into the ear of the auscultator. Two months subsequently, a second opening between the fifth and sixth ribs was formed, and gave issue to a purulent discharge mixed with air. In the first week of December, the patient expectorated for the first time a small quantity of purulent sputa. There commenced also at this time occasional attacks of orthopnœa; but the breathing during the intervals was not much distressed: the emaciation was extreme. A remarkable feature of the case was an exceedingly constipated state of the bowels, with an almost voracious appetite. On the 9th of January, the fifth rib was nearly exposed for about two inches in extent, being covered only by a few pale granulations; the quantity of the discharge by the wound continued as before; but the expectoration had quite ceased. The denuded portion of the rib became necrosed, and was gradually detached in small pieces. The patient died exhausted on the first of April.

(We suppose that a dissection was not permitted, as there is no mention in the report of the appearances after death.)

Remarks.—It is doubtful whether the formation of the abscess in the parietes of the chest was the effect of the pulmonic lesion extending itself towards the surface, or whether it was not rather a simultaneous disease developed accidentally over the situation of the cavern in the lungs. The circumstance of no air being observed to escape for three weeks after the opening of the abscess may lead us to adopt the latter opinion.—*Archives de Medecine Belge.*

Extract of Belladonna in the Reduction of Paraphimosis.

BY DR. MIGNOT, OF BORDEAUX.

A child, three years and a half old, was the subject of severe paraphimosis; the glands red, swollen, and tender; the prepuce strongly drawn back, forming a thick and apparently adherent ring, the constriction of which completely stopped the circulation. This state had lasted eight days, and the sufferings were excessive. Reduction being impossible, leeches were applied to the perineum and hypogastrium; cooling drinks, emollient enemata, cataplasms, lotions, and hip-baths were used, but they only gave slight relief and but for a short time. The strangulation became more menacing, and all the symptoms were aggravated; the glans was bluish and gangrene was threatened, when M. Mignot employed frictions around the glans, with an ointment composed of thirty parts of simple cerate to twelve parts of extract of belladonna. Under the influence of this remedy the circle of constriction relaxed, dilated, and the tissues gradually recovered their normal condition, without loss of substance or suppuration following.

The second paper had acute balanitis, brought on by a severe gonorrhœa, and followed by paraphimosis. The patient refused operation although gangrene was threatened, when the belladonna was applied, which induced relaxation and rapid amendment. It was also applied in a case of phimosis accompanied by chancres and a sympathetic bubo, and three days after its employment the dilatation of the preputial orifice was complete.—*Brit. and For. Med. Rev.*

THE COLLATERAL SCIENCES.

The Old Humoral Pathology.

Before dismissing the subject of alterations of the blood, M. Monneret has very appropriately re-called to his reader's attention the opinions of one of the physicians of the last century, Dr. Huxham, on the influence which such alterations have in the production of fevers and other diseases, with the view of comparing them with the doctrines of the modern humoral pathology.

Huxham commences his account of fevers with a description of simple fever of synocha, which, he says, is produced by an increase in the action of the solids on the fluids of the body, and by the subsequent reaction of these upon the former. He mentions three cases in which this morbid state may be induced. The first is that of a person who has taken any violent exercise; here the mere excess of the action and reaction of the solids and fluids on each other is sufficient to bring on the state of simple fever. In the second case, the quantity of the fluids is increased; as for example, by the sudden check of the perspiration, when this is abundant: fever is the consequence, and nature makes an effort to get rid of the excess of the humors. The third, is that of a person who has drank a large quantity of wine or any other stimulating fluid; the excitement brings on a simple fever, which, however, will quickly yield to rest and abstinence.

Sometimes the blood is driven along with so much force that its globules penetrate into those minute vessels which do not usually admit them; hence the obstructions and congestions which so often occur in the course of some fevers. The chief remedial agent recommended by Huxham is bloodletting, 'which by diminishing the quantity of the red globules renders the moving force more feeble.'

Now this idea, that the detraction of blood has the effect of diminishing the number of red globules, has been found by the researches of MM. Andral and Gavarret to be quite correct; and it is curious to observe that the results of recent analyses are in perfect harmony with the assertions of the old pathologists,—assertions, too, based upon mere speculative theories. We have already stated that in plethora there is always an increase in the quantity of the red globules, and that bleeding is the appropriate remedy for this condition; seeing that it very quickly diminishes the quantity of these, and does not very sensibly affect the proportion of the fibrine for some time. At the period at which Huxham wrote, considerable attention was paid to the microscopic examination of the fluids, in consequence of the great interest that had been excited by the researches and discoveries of Leuwhoeck.

He admits three leading kinds of alteration of the blood; the two first are what he calls the constitutional states of the blood, and the third is that of its dissolution and putrefaction.

The first abnormal modification is that in which the red globules are increased in quantity, squeezed one against the other, and pressed too compact and dense; hence, he says, arises an over viscid state of the fluid, and an unusual tendency to coagulate and solidify, when drawn from the body; at the same time the increased rapidity of the circulation causes an unusual degree of friction of the blood against the sides of the vessels, causing a greater development of heat. When such is the case, there is always a disposition to synochal fever, and to obstructions in the minute vessels. He attributes the buffy coat to the heat of the fever, which tends to coagulate the serous portion of the blood, and to convert it into a jelly.

We need not say that the theoretical edifice constructed by the English physician with so much ingenuity crumbles down before the recent analyses of the blood: as to the notion of the greater friction of the globules against the walls causing a greater evolution of heat, we all know that it is quite conjectural, and far too mechanical to be true.

2. The second morbid constitution of the blood is characterized by the diminution in the quantity and in the density of the globules, and by an increase in that of the serum or watery portion. This condition is accompanied with pallor of the surface, great weakness, imperfection of the secretions, and a tendency to dropsical effusions. There is also a disposition to obstructions, not indeed of an inflammatory kind, as in the former case, but of a cold or torpid character from the diminished excitability of the vessels, in which the blood is apt to stagnate. Passive congestions too are liable to take place in this manner. The diminution in the proportion of the red globules, which Huxham had adopted on hypothetical grounds, has been demonstrated in the present day. This condition is observed in cases of anæmia, chlorosis, and of cachexia induced by long-continued chronic diseases.

3. The dissolved state of the blood is observed in scurvy, which may be considered as the type of this alteration: hæmorrhage and adynamia are the chief phenomena indicative of its existence. The coagula of the blood are soft, loose, diffluent, and without any buffy coat. The serum separates only imperfectly from the coagulum. The blood drawn from persons affected with petechiæ and ecchymoses often forms a uniform semi-coagulated mass of a darker color than usual, and passes readily to putrefaction. Huxham believed that the hæmorrhages are generally owing to the acrimony of the fluids destroying tho contexture of the blood itself and corroding the minute capillary vessels. He says that, if we examine the blood while within the vessels, we may observe the globules elongated to enable them to traverse the small tubes. He thence infers that they become broken up in their passage and that their debris enters readily the excretory vessels and transudes from their extremities. He thus accounts for the hæmorrhage which not unfrequently occurs from the bowels and urinary passages, as well as for the petechiæ and ecchymosed spots on the skin and some of the mucous surfaces. A dissolved state of the blood is not incompatible with the development of inflammation. Huxham describes particularly an epidemic pneumonia which was exceedingly fatal, especially among the inmates of prisons, ships, &c., and in which, although all the symptoms of the disease of the lungs were present, the blood drawn was soft and devoid of its normal consistence. The causes of this condition of the blood are, according to him, two fold. In some cases it is the result of spontaneous changes within the vessels, and in others it is induced by the introduction of poisonous matters into the system. Among these—the poisonous matters—he enumerates alkaline salts, muriate of ammonia (which has the effect of destroying or dissolving the blood globules very rapidly,) cherry-laurel water, mercury, salt, and decayed provisions, the virus of serpents, &c. An elevated temperature has been considered by some to be sufficient to induce a dissolved state of the blood. Boerhaave tells us that he confined a dog in a heated stove, and that, in proportion as the animal sweated profusely, he observed a tendency to hæmorrhage from various parts of the body. However we may view this experiment, it will be admitted by all that fevers, in which the blood is in a thin uncoagulable state, are more common in hot than in cold and temperate climates.

As to the intrinsic causes, or those which are generated within the system itself, we may allude first to the admixture of purulent and other septic matters with the blood. The recent experiments of Gaspard, confirmed as they have been by subsequent researches, have most satisfactorily demonstrated the striking changes which the blood undergoes by the contamination of such matters. They seem to act more especially by modifying the relative proportions of the fibrine and the red globules, either by diminishing the quantity of the former or by increasing the quantity of the latter.

In taking leave of Huxham, we cannot avoid expressing our admiration at finding in his writings such a multitude of curious facts which, far from having been overthrown by the discoveries of modern analysis, have been confirmed in a very striking manner by them; and our admiration is the greater when we remember that it was only by reasoning and hypothesis that he was led to the enunciation of such important truths.—*Gazette Medicale.*

ITEMS AND INTELLIGENCE.

The Hartford Retreat for the Insane.

We have received the able and interesting report of Dr. Brigham, the talented medical superintendant of this well-conducted establishment. A larger number of patients have been admitted, and a larger number have recovered and been discharged, than during any previous year of the existence of the 'Retreat.' At the beginning of the year, the number of patients was—

	Total.	*Men.*	*Women.*
	83	41	42
Admitted during the year......	96	45	51
Total number during the year..	179	86	93
Discharged, recovered........	56	27	29
Improved.................	16	6	10
Unimproved...............	9	6	3
Dead....................	8	6	2
	89	45	44
Remaining at the Retreat......	90	41	49

We extract the following judicious remarks as worthy of attention :—

'The records of cases at this institution, and my own observation justify me in saying that the neglect of moral discipline,—the too great indulgence of the passions and emotions in early life, together with the excessive and premature exercise of the mental powers, are among the most frequent causes that predispose to insanity. But these causes are in no other way operative in producing insanity, than by unduly exciting the brain. By neglect of moral discipline, a character is formed subject to violent passions, and to extreme emotions, and anxiety from the unavoidable evils and disappointments of life, and thus the brain, by being often and violently agitated, becomes diseased; and by too early exercising, and prematurely developing the mental powers, this organ is rendered more susceptible and liable to disease.

'I am confident there is too much mental labor imposed upon youth at our schools and colleges. There have been several admissions of young ladies at this institution, direct from boarding-schools, and of young men from college, where they had studied excessively. Should such intense exertion of the mind in youth not lead to insanity, or immediate disease, it predisposes to dyspepsia, hysteria, hypochondriasis, and affections allied to insanity, and which are often its precursors. Should that portion of the community who now act most wisely in obtaining a knowledge of the functions of the digestive organs, and in carefully guarding them from undue excitation, be equally regardful of the brain, they would do a very great service to society, and in my opinion, do much towards arresting the alarming increase of insanity, and all disorders of the nervous system.

* * * * * * *

'One case was preceded by a homicidal propensity, and its bearing is so direct upon the medical jurisprudence of insanity, that I will briefly relate it. It was that of a lady, the mother of three children, one of whom she suddenly killed by repeated wounds with a hatchet. She had not been considered insane previously, though she had for some time been some unwell, and low spirited. Soon after the act, she endeavored to kill herself, and was brought to the Retreat a decided and wretched maniac. For several weeks she remained without much change, rather stupid, as if no recollection of the past. After this her bodily health began to improve, when suddenly the memory of what she had done seemed to return, and the agony she was then in for a few hours, until her feelings were overcome by opium, was indescribable and most painful to witness. She however recovered, after various changes and symptoms, among the most striking of which was violent palpitation of the heart. This lady has now been well for nearly one year, and had the care of her family as usual. She has visited us since her recovery, and has often assured me that she could recollect no motive whatever that induced her to commit the act, and does not believe that she thought of it until she saw the hatchet. This case I consider important in reference to the medical jurisprudence of insanity. It seems to have been an instance of that singular form of mental disease, mentioned by Esquirol and others, which suddenly impels a person who has previously exhibited no disorder of the intellectual or moral powers, to take the life of another without motive,—without passion or interest, but apparently from a sudden and irresistible impulse. Had this amiable lady and affectionate mother killed a neighbor or domestic, I fear there would have been difficulty of convincing a jury that the act was the consequence of insanity.'

Closure of Druggists' Stores on the Sabbath.

TO THE EDITOR OF THE LANCET.

SIR :—

In your valuable journal of June 11th. I noticed an article in relation to the practice of keeping drug stores open on Sundays for the transaction of ordinary business and for selling of soda water. I expected that a subject so important would have been followed up by yourself or some correspondent, and such an appeal made to the good sense of druggists and physicians, as would induce them to reform this unseemly and unjust trafficking. When we consider the matter in all its bearings, it must be acknowledged that druggists in New York are guilty of a heinous offence against the morals of this community. How any class of men professing Christianity, or even pretending to respectability, can open wide the doors of their establishment on the Sabbath day for the transaction of business, and can thus engage themselves and the thousand young men in their employ during the sacred hours of public worship, without feeling ashamed of their conduct, certainly displays a degree of depravity highly censurable, and proves the blighting effects of bad habits on the better feelings of our nature. But there is a meritorious and much neglected class of young men who are especially wronged by the continuance of this custom—I mean drug clerks—and it is strange that in this age of moral reform and Christian philanthropy that no one has come forward and espoused their cause. Is it not enough that in week days they are confined more closely than the members of any other business or profession ? Is it not notorious that they are kept at their posts from 7 o'clock A. M. until half-past 10 P. M., and liable to be called up at any hour of the night, and all this too for a very small salary ? But why, I ask, are they cheated of that day of rest allotted them by their Creator ? I grant that the sick must be attended to, but let the druggists in New York show a disposition to reform this sacrilegious pandering to a vile custom, and a plan may be adopted by which the sick can receive all requisite aid, and the drug clerks relieved of a task alike ruinous to their moral nature and bodily health.

I would therefore propose that a public meeting of the druggists in New York be called at an early day, and some such plan as the following be submitted to their consideration, viz. to keep drug stores open on Sunday until 10 or 12 M., and let the public know that medicine cannot be obtained after that hour, except at the public Dispensaries, or Hospitals, or otherwise calling at the private residences of the druggists. In this way a glaring abuse can be rectified, and physicians, who are to a certain extent abettors to the crime, ought to stir themselves to remedy the evil. Let all prescriptions be sent in by 12 o'clock M., and let the public provide themselves with such medicines as they may require on Saturday or by said hour on Sunday ; in this manner much good could be effected—the poor would receive benefit from the profits of medicine sold in the Dispensaries—a numerous body of young men would be improved by being able to attend church and the other duties of that day—besides the example thus set by New York would doubtless be followed by every city in the Union.

I send you, Mr. Editor, this hasty sketch in the hope that you will give the subject further consideration, and that some public spirited members of the profession may be induced to come forward in behalf of the drug clerks, and thus aid in rooting out a custom odious and demoralizing.

MEDICUS.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending June 25, 1842.

32 Men, 28 Women, 46 Boys, 33 Girls. Total, 139.

DISEASES.

Apoplexy	0	Intemperance	0
Asthma	0	Inflammation	1
Asphyxia	0	Of liver	4
Abscess	0	Of bladder	1
Aneurism	0	Of brain	5
Bleeding	1	Of stomach	2
Bleeding from stomach	0	Of chest	6
Bleeding from lungs	1	Of lungs	9
Burned or scalded	0	Of bowels	6
Casualties	2	Of heart	0
Cholera infantum	4	Of kidneys	0
Cholera morbus	0	Insanity	2
Cancer	0	Jaundice	0
Consumption	32	Killed or murdered	0
Convulsions	11	Lues Venera	0
Croup or hives	0	Mortification	0
Debility	0	Malformation	2
Delirium tremens	0	Marasmus	9
Diabetes	1	Measles	1
Diarrhœa	1	Old age	0
Death from poison	0	Organic disease of heart	2
Dropsy	0	Palsy	0
Dropsy in head	8	Rupture	0
Dropsy in the chest	9	Rheumatism	0
Drowned	0	Spinal disease	0
Dysentery	1	Suicide	0
Erysipelas	1	Sprue	0
Epilepsy	1	Small-pox	2
Fever	2	Scrofula	1
Scarlet	11	Teething	0
Typhoid	5	Tumor	0
Puerperal	0	Unknown	1
Remittent	1	Ulceration of throat	1
Bilious	0	Ulcers	1
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	0
Fracture	0	Worms	0

AGES.

Of 1 year and under, 33 ; between 1 and 2, 10 : 2 and 5, 15 ; 5 and 10, 8 ; 10 and 20, 6 ; 20 and 30, 17 ; 30 and 40, 13 ; 40 and 50, 12 ; 50 and 60, 6 ; 60 and 70, 2 ; 70 and 80, 3; 80 and 90, 0 ; 90 and 100, 1 ; 100 and upwards, 0 ; unknown, 0.

WILLIAM A. WALTERS, City Inspector.

City Inspector's Office, June 26, 1842.

THE
NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, JULY 9, 1842. No. 2.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XIV.

Croup—Pathology—Its Causes—Various Forms—Complications—True and False Croup—Diagnostic Characteristics—Treatment—Tracheotomy.

Gentlemen:—

Inflammation, when it attacks a mucous membrane, commonly induces first an increased secretion of ordinary mucus, which in time becomes changed into more or less perfect pus, and that either with or without the existence of ulceration. It sometimes, however, happens that the consequences of this inflammation are more analagous to what we notice when mucous membranes are inflamed, and that coagulable lymph is poured out. We may say that there is something specific in this, but this is no explanation of the phenomenon. We never reason, when we come to study such cases, why lymph should take the place of the ordinary secretion. It certainly is not the effect of either increased or of diminished inflammatory action—it is not the result of age or constitution; in short, its cause entirely escapes us—but its effects are well known, and are sometimes extremely disastrous. This form of inflammation is not peculiar to any one of the mucous membranes; we find it affecting them all—that of the intestinal canal, that of the throat, and finally that of the larynx and trachea—in the latter situation it furnishes peculiar interest, and constitutes the disease we call Croup, which is to form the subject of my remarks at this time.

In examining patients who have died of croup, we find a more or less marked exudation of coagulable lymph in the larynx or trachea—this I conceive to be essential to establish the true nature of the disease—it being always found, except in certain cases, where it has all been expectorated during life, and the patient has died of exhaustion or of some complication. Sometimes the exudation is limited to certain portions, assuming the appearance of little patches. In the upper portion of the larynx, about the glottis, these patches are usually very adherent, and appear to be covered with an epidermis—lower down, however, these patches of false membrane, although still sufficiently adherent, never appear covered by a cuticle—they are usually coated with a purulent and frothy mucus. In other cases, the interior of the larynx is coated by a single membrane, which may extend itself into the trachea or even into the bronchi. The firmness and thickness of this membrane varies very much in different cases. In cases which terminate fatally during the first or second day, this membrane is exceedingly delicate, becoming more thick as the disease is prolonged. Sometimes it is white and transparent, at others yellowish and opaque, or spotted with red points or lines on the surface towards the mucous membrane. It does not always present the appearance of an uniform membrane, but sometimes appears as if composed of numerous flocculi united together. In some cases it is very firm and resisting, in others more soft and partially dissolved, less so however in the larynx than in other portions of the tube. These false membranes thus formed, show a more or less marked tendency to become detached, less indeed in the larynx than below, and when detached and expectorated they may readily form again. In other cases, judging from what we notice in the throat, these membranes are absorbed without being detached at all. Finally, besides the false membrane, we find the trachea and bronchi filled with a greenish-white mucus, almost fusiform, which is sometimes formed between the false membrane and the walls of the canal, at other times only in the centre of the membranous tube. Dr. Cheyne calls this false membrane in a fluid state.

The appearance of the mucous membrane itself is also an object of importance. On the epiglottis and the edges of the glottis it usually appears red and swollen, while the parts below exhibit less of this appearance, the redness being usually interrupted and formed by longitudinal lines, although sometimes of an uniform bright color. In certain cases the redness is of a deep livid color, and the mucous membrane is thickened—while in those whose constitutions have been exhausted by previous disease, the mucous membrane appears, sometimes, perfectly pale. The mucous follicles about the root of the tongue and the pharynx are commonly found enlarged. Now from this anatomical description two important facts may be deduced—1st. That the tendency to form coagulable lymph does not appear to depend at all upon the violence of the inflammation. 2d. That in no case is this formation so thick as to close completely the air passages, and thus of itself produce suffocation.

What are the *causes* of this disease? On this subject we know very little. It is not confined to any particular age, as some have supposed. It is by no means peculiar to children. I have myself seen several well marked cases of it in the adult. It attacks the vigorous and the enfeebled, those who are well cared for and those who are neglected. Dr. Cheyne thinks that the sea coast is particularly favorable to the development of this disease, but it is certainly prevalent in Paris, which is an hundred miles from the sea. Certain regions, however, seem to be remarkably exempt from it—the South of France for example. Finally, this disease may be sporadic or epidemic. It is remarkable that no description of epidemic croup has yet appeared among the English writers—yet there are several very good descriptions of this kind to be found. M. Brettoneau, of Tours, has very accurately described two epidemics under the name of 'Diptherite,' and other continental writers have done the same. The late Dr. Bard also, of this city, published in 1771, a memoir on the nature, causes, and treatment of the 'Suffocative Angina.' This disease was about that time epidemic in New York, and corresponds with the Diptherite of Bretoneau. My friend Dr. Beales, of this city, has described to me a similar epidemic, which prevailed some years ago in the city of Mexico, where he then resided. This epidemic form, as is often the case you know with epidemics, attacks most commonly the crowded, ill-fed, poor population, and is commonly also of an ataxic character. It appears also to be a more general affection than the sporadic form, extending from the throat to the larynx—and I may remark here that there is much difference among practical writers on this subject, as to the way in which croup commences in the sporadic form. M. Guessent, of the Children's Hospital, Paris, an author of vast practical experience, tells us that in five out of every six cases of sporadic croup, the false membranes are also formed in the throat He even goes so far as to state that he has never seen an exception to this in children between the ages of one and two years; while Dr. Cheyne, one of the best English writers on the subject, entirely denies this, although he admits among the symptoms at the commencement, the occasional existence of a blush of inflammation in the fauces. It is easy to see how important an use might be made of M. Guessent's views if they should prove true, and the necessity of inquiring into the matter for ourselves—a thing which I confess has not yet been enough attended to.

Again, croup occurs in the course of other diseases—as hooping-cough, measles, scarlatina, and small-pox—and in adults, during phthisis and other chronic diseases; indeed, in adults, it perhaps seldom attacks healthy vigorous constitutions.

Croup, as it occurs in children, is usually a very acute disease, terminating in fatal cases in from two to seven days, and sometimes even on the first day. It is sometimes, however, described as a chronic affection, the patient occasionally expectorating portions of false membrane for several weeks.

True croup, that attended with the formation of false membranes, is an extremely formidable disease. M. Guessent makes the mortality as great as four in every five cases. In the epidemic form it is also extremely fatal, but in different degrees. Thus in an epidemic that occurred at Wertheim, less than one in ten recovered; while in the report of Vieusseux, only one half the cases died. You will soon know how to appreciate the stories of those who boast of frequently curing cases of croup, and may readily, and I think truly, suspect that they have mistaken the disease. I shall bye and bye, endeavor to point out to you how this mistake is made, and the way to guard against it.

I will next say a few words to you in relation to the complications of this disease. I have already mentioned that the mucous follicles in the throat were commonly enlarged. The lymphatic glands of the neck are also apt to become inflamed early in the disease, and this to terminate in suppuration. At a later period we often find symptoms of cerebral congestion developing themselves, and sometimes pneumonia and common bronchitis coexist. It is not usual, however, in children, to find the lungs much congested; the right side of the heart, however, is apt to be distended with blood.

Simple croup when it attacks healthy children, commences with a short, dry, hoarse cough, accompanied by hoarseness of the voice. This state of things may continue unchanged from one to several days, or only for a few hours. This slight catarrhal affection of the larynx may or may not be accompanied by fever and slight pain in the part affected. As the disease advances, the cough bemore frequent and ringing—it has been compared to air passing through a metalic tube; sometimes it is said to resemble the bark of a small dog—at others, the clucking of a chicken, or the crowing of a young cock; it is during the inspiration that follows the cough, according to Cheyne, that this crowing voice is manifest. The respiration has now become permanently affected, the air enters the lungs as if drawn in by a piston, the inspirations, particularly those which accompany and follow the croup, being slightly hissing. The cough also induces paroxysms of strangulation—the voice has become feeble and whispering, and sometimes complete aphony is present. The countenance appears either swollen or flushed—there is some tendency to somnolence, with anxiety and considerable febrile excitement. It is said that convulsions sometimes ensue in young children, but never delirium. These symptoms indicate the full development of the disease. If now the case is to terminate favorably, the cough becomes more loose—expectoration is established—the patient expectorates mucus mixed with shreds of false membrane—the paroxysms of strangulation subside—the fever abates—the pulse becomes less accelerated—and finally the patient may recover. Sometimes large portions of false membrane are expectorated. Here is a specimen of three or four inches long, and a perfect tube with the first divisions of the bronchi all expectorated in one piece, and yet this patient died. Indeed it often happens that the favorable symptoms that follow the increased expectoration are often of short duration—either new false membranes form, which bring back all the violence of the disease, or the previous exhaustion has been so great that the patient cannot rally, although the obstructing cause is removed—or some secondary inflammation or congestion, as of the brain, is present, sufficient to lead to a fatal result. In most cases, however, that go on to a fatal termination, the patient dies in a state of stupor during the intervals of the paroxysms of suffocation—the respiration becomes very much labored—the countenance cold and pale—the lips of a livid hue—the extremities cold—the pulse much accelerated and feeble—and the child, gasping for breath, finally dies. Perhaps the fourth day may be assumed as the mean termination of the fatal cases, although it is not uncommon for them to survive until the seventh day, or the attack may even terminate much earlier, as during the first day or two.

This then is the true croup, a rare disease comparatively, and certainly a very fatal disease. Let me now call your attention to anotber affection often mistaken for true croup, which is much more common, and fortunately attended with little or no danger, although it often excites much alarm. This is the *spasmodic* or *false croup*, as it is sometimes called. It seems to be a simple inflammation of the larynx of a mild character in itself, but accompanied by much disposition to irritation and spasm. This affection almost always begins at night. It is sudden in its attack. The child after going to bed, well, perhaps, or but slightly indisposed, is suddenly seized with great difficulty of breathing, a hissing inspiration, a hoarse, sonorous cough, which increases the paroxysm of suffocation. With this the face may become flushed and the pulse accelerated, but there is no fever. The paroxysms of strangulation are more or less frequently repeated, but they gradually subside, and the child in the morning complains of nothing but a slight cough and a little hoarseness. The same symptoms may recur the next night, but with less violence, and gradually subside with the symptoms of a common catarrh.

Now the diagnosis between these very different affections, the true and the false croup, can be very easily drawn. The true croup is slowly developed, its paroxysms of suffocation come on gradually, and and become more and more marked. In the false croup the attack is very sudden, particularly in the night, and the first paroxysm is the most severe and threatening, the next is less marked, and the attack soon passes off, for the night at least. In the true croup there is considerable febrile excitement, unless the patient be much exhausted from febrile disease or some other cause. In the false croup there is no fever. The face indeed may become flushed and the pulse accelerated from the agitation of the patient, but the skin is not hot. Thus we have, on the one hand, a disease progressive in its character, and in most instances going on to a fatal termination; and on the other, an intermittent or spasmodic affection, creating much alarm, but attended with but little real danger.

I will now proceed to speak of the treatment of this affection, leaving out of view, I may premise, the epidemic form, and merely remarking with respect to it that it does not usually require the active treatment that the sporadic form does as it occurs with us. Croup, when it attacks robust, healthy children, and is accompanied by symptoms of acute inflammatory action, requires, I need scarcely say, the most rigid antiphlogistic treatment. The best treatment, in mild cases, is to employ nauseating doses of tartar emetic, with demulcent drinks, and the use of the warm bath. It may perhaps be only a slight catarrhal affection, and by the adoption of these means, the patient will be relieved and the necessity of more active treatment superseded. But if true croup be well developed, active depletion by the lancet is imperiously demanded, and the quantity of blood to be taken must be regulated by the strength of the patient and the manner in which he may bear the bleeding. In most cases, if you can, I would recommend you to bleed from the arm. In infants this operation is, indeed, generally attended with some difficulty, from the fatness of the arm and the small size of the vein. If it is found impossible to bleed from the arm, you should open the external jugular vein; and this again is an operation to secure the success of which requires even more tact and experience than the other. But the blood must be taken freely from one or other of these sources. In combination with this general bleeding we may make use of leeches, but you should recollect never to apply them over the larynx, as you would thereby increase rather than diminish the tendency to spasm. The leeches should be applied over the external jugular veins, or edge of the sterno-cleido-mastoid muscle. Nauseating doses of ipecacuanha or tartar emetic are also to be exhibited; you will remember, however, what I have already said respecting the precaution to be used in the administration of the latter to children. The patient should also be placed in a warm bath, which is a very valuable adjunct to the other treatment. I am very often in the habit of placing the child in the warm bath when the leeches are applied, as in this way the bleeding is more copious. If these means succeed in checking the progress of the disease, you will be extremely fortunate. Many authors are in the habit of saying that they can check croup at its commencement by active treatment; and it may be so, that is, the disease *can* be checked in this way, but I believe that all practitioners of experience will agree with me that this fortunate result is far from being obtained in many cases. Although it may be generally true that this active treatment will mitigate the severity of the symptoms and render the safe termination of the disease a more likely event, yet you will almost always find that the disease will, notwithstanding, go on till the second stage is fully developed.

So soon as you are sure that the false membranes are formed, new indications for treatment are presented. If the patient have not been bled, a certain amount of depletion is of course required. But if the patient have already been treated in this active depletory way, and the progress of the disease have not been arrested, then the indication is to change, if possible, the disposition to secrete lymph and to restore the natural secretion of the mucous membrane, and to get rid of the false membrane which has been formed. These important ends are to be sought by the free administration of calomel. I believe it is now pretty well established that calomel given freely, so as speedily to produce its appropriate effect, affords the chief ground of hope in these cases. In combination with the calomel, and if the antiphlogistic treatment have been carried sufficiently far, and the inflammatory symptoms have disappeared, you may use stimulating expectorants, which seem to exercise a beneficial effect in restoring the natural secretions. Of these stimulating expectorants, Coxe's 'Hive Syrup' is undoubtedly the best, and is very similar to a mixture used for the same purpose in the Children's Hospital of Paris. This medicine should be given in doses sufficiently large to produce nausea. You must persevere in the treatment which I have just described until you have evidences of a favorable impression having been made on the disease; and if the character of the cough changes and becomes moist, you may certainly regard that as a very favorable indication; as it shows that the secretion of lymph is gradually changing its character, and it is by the formation of mucus in the tube that the false membrane becomes broken up into shreds or is expectorated as a whole. This then is the most favorable state of things possible.

Unfortunately, however, this disease is attended by great fatality, and often all our most judicious treatment proves unsuccessful. In many cases after the false membrane has been apparently removed, the patient remains in a very exhausted state, and if the antiphlogistic treatment in such cases be prolonged the patient will inevitably die. The vital powers must in such cases be sustained by every means in our power. Wine-whey must be given freely, and external stimulants be applied for the purpose of rousing the patient.

The treatment of false croup is very simple and very successful. Very few of these cases terminate fatally. They are alarming certainly, but more so than dangerous. One remedy is almost uniformly successful—that is, tartar emetic in nauseating doses, so as to produce vomiting. Many parents, indeed, know as well how to treat such cases as the physician. The warm bath and the use of demulcent drinks may also be employed. If the patient be very plethoric, leeching may be indicated; but as a general rule, bleeding is unnecessary.

I must say a word or two in conclusion on the practice of tracheotomy in croup. This operation has generally been unsuccessful, as the following statement will show:—Thus in 140 operations performed by the first surgeons in France, it succeeded only 28 times. Now this is very poor encouragement surely. But it should be remembered that the operation is commonly performed very late in the disease, after cerebral congestion, or perhaps pulmonary inflammation has supervened—or at all events, when the powers of the constitution have become so far exhausted that they will not rally. We know very well that where the false membrane has been nearly or quite expelled, that patients will sometimes die of some complication, or from mere exhaustion. Why not, then, when an artificial opening is made below the seat of the disease? The operation, then, if likely to succeed, must be performed much earlier than it is commonly performed—and with what degree of success?—that remains yet to be seen. I must here allude again to the value of auscultation in establishing the propriety of tracheotomy. In all cases of difficult breathing in which this operation seems indicated, put your ear upon the posterior and inferior portions of the chest, and hear if the air enters freely there. If it does so, the operation can be of no use, for a mere want of air is not the difficulty.

[By an error on our part, this lecture has been made to precede that on 'laryngitis,' which will appear in our next.—Ed. L.]

CLINICAL LECTURE ON DELIRIUM TREMENS;

BY

GEORGE BUDD, M. D., F. R. S., PROF. OF MEDICINE.

Delivered at King's College Hospital, Nov. 20, 1841.

The case of Embleton is a fair specimen of the delirium brought on by excessive drinking. During the years I was physician to the Dreadnought, I had constantly cases of this kind under my care. The frequency of delirium tremens in sailors is very readily explained.

When a ship returns from a long voyage, the crew are paid off. A man receives at once £40, £50, or £60, and is immediately laid hold of by the most despicable of human beings—the crimps, as they are called, or the agents of the keepers of the filthy lodging-houses in the neighborhood of Wapping. He is taken to one of these houses, and kept in a state of constant intoxication for a fortnight or three weeks. By this time his money is generally spent. His clothes are then pawned, and this supplies him with drink a day or two longer. When this last resource fails, when the system of robbery can be carried on no longer, the supply of drink is stopped, and the sailor is turned adrift to shift for himself. In a few days he is brought to the hospital in a state of delirium tremens.

I have known sailors, who had received as much as £70, reduced to complete destitution in the course of two or three weeks. During the time they are kept in this state of intoxication they eat nothing, often not so much as a morsel of bread, for days; they live, as they express it, on the liquor.

When they are brought to the hospital, the condition of all these men is very much alike. The face is flushed, the eyes are suffused, and there is often a peculiar wildness in their air and manner, even when there is no actual delirium. The tongue is pale, moist, and indented; and the hands as well as the tongue are very tremulous. Appetite is quite gone, and they have generally repugnance for food of every kind. In spite of this nervous agitation the pulse is steady and tranquil, and very seldom increased in quickness.

But what is characteristic of the disease, as characteristic as the trembling, is the loss of sleep. They all tell you that they have had no sleep for nights; and that the moment drowsiness comes over them, or even without this, at the approach of darkness only, they are haunted by visions of the most frightful kind: they see serpents about the bed, and are pursued by devils of every size and shape. The constancy of these horrid apparitions has furnished a name to the disease. The term, in fact, by which it is known to sailors, and a very appropriate one it is, is the 'horrors.'

This name has, no doubt, passed down through many generations of sailors. Smollet uses it in Roderick Random. Smollet, in early days, was a surgeon's mate in a man-of-war, and sketched Roderick from the life. Roderick, in relating his history, says, 'I awaked in the horrors, and found my imagination haunted by such dismal apparitions, that I was ready to despair.' This very properly happens to Roderick, a day or two after he set sail. In delirium tremens from drinking, the patient generally gets more violent, and is in every respect worse, a day, or two or three days, after he has left off drinking. Sailors are themselves aware that a glass of grog steadies them when in this condition.

In some cases, the men are more violently delirious: they are continually vociferating, and talking in the wildest and most incoherent manner; they are in a state of great agitation and tremor, and their body is bathed in sweat; yet even in these cases the pulse is generally calm and steady.

The character which the delirium assumes is that of hallucination. They see unreal objects, and these objects are almost always of a frightful kind. In some cases, but these are rare, the illusion extends to the sense of hearing. They hear the objects by which they are haunted, talking, and occasionally calling them by name.

But hallucination is more rare for the sense of hearing than for that of sight; probably because more vivid impressions are received through the eye than through the ear. Ghosts are more frequently seen than heard. Dr. Abercrombie thinks that dreams are chiefly occupied with objects of sight. In his work on the Intellectual Powers, he says, 'I am informed by a friend, who is a keen sportsman, that he often dreams of being on a shooting excursion; that he starts his game and points his gun, but never succeeds in firing it. It sometimes seems to miss fire; but in general there is something wrong in the lock, so that it cannot be moved.'

It was probably the poet's own experience that frequent and deep potations give birth to hallucinations of a frightful kind, that suggested to Burns the scene of the witches in Tam O'Shanter. Tam, returning late after a drinking bout, passes by All Hallowe'en Church, in which he sees warlocks and witches in a dance, with Auld Nick for their piper. The objects with which the fancy of the poet has filled up the picture are certainly frightful enough:—

> 'Coffins stood round like open presses,
> That shawed the dead in their last dresses;
> And by some devilish cantrip slight,
> Each in his cauld hand held a light,
> By which heroic Tam was able
> To note upon the haly table,—
> A murderer's banes in gibbet-airns;
> Twa span-lang, wee, unchristened bairns;
> A thief new cuttit frae a rape
> Wi' his last gasp his gab did gape;
>
> * * * * *
>
> A garter which a babe had strangled;
> A knife a father's throat had mangled,
>
> * * * * *
>
> Wi' mair o' horrible and awfu',
> Which e'en to name wad be unlawfu'.'

This description, though highly colored, is true to nature; but such hallucinations usually arise after prolonged excess, and not, as Burns makes it, after a single sitting.

Another character, very general in these cases, which seems allied to the frightful nature of the hallunications, is despondency and a tendency to suicide. Even in slight cases I have known men suddenly burst into tears while I have been questioning them.

Well-marked cases of delirium tremens are easily recognized. Their characters are so striking, that, taken with the previous history of the patient, they can scarcely be mistaken; but this is not the case with the slighter degrees of the same affection. These are marked only by lowness of spirits, and inability to sleep; or by sleep which is interrupted by frightful dreams. It is a condition which is familiar to many by the name of the 'blue devils,' which, in the majority of cases certainly, must be ascribed to excess in drinking. Men of jovial habits—who take what is called a cheerful glass, and enjoy company and good cheer—are remarkably subject to the blue devils. They are low and desponding in the morning, and their nights are sleepless, or their sleep is broken by dismal dreams. In the language of sailors, they have the 'horrors.' It is the temperate man only whose spirits are uniformly good.

Embleton told us that the objects by which he was haunted, though continually shifting their shapes, were always of a blue color. I have often heard sailors make the same remark; and I am inclined to think that this is a very general character of such apparitions. Müller, speaking of phantasms, says that they are generally divested of color.

I have said that in delirium tremens, the pulse, except after considerable muscular exertion, rarely exceeds its ordinary frequency. In cases in which it does, there is generally inflammation of some internal organ.

The organs most frequently inflamed are the stomach and the lungs.

It is not at all uncommon to find a man affected with the horrors, who, in addition to the ordinary symptoms—the delirium and the trembling—has frequent vomiting, a furred tongue, and a quick pulse. Such symptoms generally indicate inflammation of the stomach, and are of very bad augury; because, when they are present, the patient is unable to take solid nourishing food, which is a very important part of the treatment, and, indeed, frequently indispensable to recovery. In a case of this kind I have found the mucous membrane of the splenic extremity of the stomach reduced to a mere pulp.

The lungs are much less frequently inflamed than the stomach; but I have met with two or three instances of delirium tremens which proved fatal, apparently from the occurrence of pneumonia.

In none of the cases in which I have made an examination after death—in all, four or five—have I found any evidence of inflammation within the head, other than effusion of serum under the arachnoid. The symptoms do not depend on any inflammatory affection of the brain, but on exhaustion, consequent on over-excitement, and in part, perhaps, on the condition of the blood. We can hardly suppose that the blood should not become altered, and for some time remain so, by the continual admixture of spirits. The spirit undoubtedly exerts some degree of chemical influence.

Sailors, in whom I have chiefly observed delirium tremens, are men whose constitutions are not broken by habitual intemperance, but strong, robust men, most of them in the prime of life, who get drunk only while they are in port. From these circumstances the affection in them is somewhat different from what it is in the habitual drunkard; but the main characters and the indications of treatment are alike in both.

The chief remedy is opium; but it must be given in large doses, so as to procure sleep. In small doses, it does comparatively little good. When a man has been for days in a state of nervous agitation, and has had no rest for several successive nights, our object should be to procure sleep. I have often, as in the case of Embleton, seen a man in a state of raving delirium fall asleep under the influence of a large dose of opium, and, at the end of some hours, awake perfectly rational.

The plan into which I settled for the treatment of delirium tremens, such as I used to meet with in sailors, is to give one drachm of tincture of opium, every hour, for three or four successive hours, if the patient should not fall asleep before; and, as soon as he awakes, to give him a mutton chop, or some solid food.

I have already told you that these men, as long as their drinking bout lasts, eat nothing; and although, while the state of excitement continues, they have great seeming strength, and in some cases can be mastered with difficulty, yet, as soon as it subsides, they are always in a state of debility, and evidently require nourishing food. This is indicated, even while the delirium persists, by the condition of the tongue, which is almost always, in these cases, more or less indented; a condition you will generally find associated with states of debility.

Before they have slept they are unable to take food; their appetite is completely gone; a circumstance which must be attributed not to the state of the stomach merely, but to that of the whole nervous system; for the appetite generally returns when the system has been refreshed by sleep.

I consider this point—to give as soon as possible some solid food—a most essential one in the treatment; and have almost invariably found men get worse in cases where, from some mistake or neglect, it has been omitted.

I have said that opium should be given in large doses; but even these sometimes fail in procuring sleep. It is indeed astonishing how much of it can be taken by persons in this state of nervous excitement without sensible effect. In one instance in which I had left directions that a drachm of laudanum should be given every hour until the patient slept, ʒx. were given in the course of twenty-four hours, without producing the slightest sign of narcotism; and it was only after the last does that the patient fell asleep.

A similar insensibility to the ordinary effects of opium is witnessed when it is given to relieve very severe pain or spasm. Doses, which in other circumstances would be dangerous, may be given not only with safety, but without apparent effect. But although large doses of opium may be given, and are even required, to relieve severe pain, or to control violent spasm, or to calm the nervous excitement of delirium tremens, you must not suppose that its employment requires no caution in these cases. The rule generally laid down, and I believe it is a good one, is to discontinue the opium when it has produced contraction of the pupil. Different narcotic substances produce different effects on the pupil. Belladonna dilates it; the first effect of opium is to contract it. Contraction of the pupil shows, therefore, that the system is powerfully affected by the drug, and should caution us against its further employment.

When the opium acts favorably, when it procures a quiet sleep of several hours, the benefit resulting from it is remarkable: the delirium has ceased, the agitation has subsided, and, if the appetite have also returned, the patient is convalescent. But in some cases, opium, in however large doses we give it, fails in producing this effect. It calms the patient in some degree, and brings on a dosing state, which is often interrupted by startings, and from which the patient arises but little refreshed.

In many such cases, where opium had failed in composing the patient, I have seen admirable effects from wine or brandy, especially where the patient had left off drinking for several days. The delirium and nervous agitation seem to result partly from the sudden withdrawal of the stimulus. I have remarked that the men generally are much worse two or three days after they have left off drinking, and that they are aware that a glass of grog steadies them. But I would only give wine or spirit when opium had failed to procure sleep, and when the delirium had persisted some days after the patient had discontinued drinking.

Another important point in the treatment of delirium tremens is, that the patient should be removed as much as possible from all causes of excitement: his room should be quiet, and few persons should be allowed to visit him.

The last point that I wish to impress on you, is, the great importance of narrowly watching the patient. I have already stated to you that in this disease, even in its lighter shades, the patient is possessed by gloomy ideas, and has often a strong propensity to suicide. He should therefore be narrowly watched, and every instrument by which he can effect self-destruction should be placed out of his reach.

For want of these precautions, we had a very tragic scene on board the Dreadnought, in the summer of 1838. Three men, Parrymore, Baily, and Forster, were brought into the hospital the same day in delirium tremens. They were treated in the usual manner; and I believe a straight-waistcoat was placed on each. The day after their admission, Parrymore was very much better, and gave me a clear account of many particulars of his case—as, of the voyage he had last made, the time he had been in port and the money he had spent. All restrainst was in consequence left off. The same evening he cut his throat with a clasped knife, which sailors generally carry about them. The surgeon, who was in immediate attendance, found him sitting up in bed, bleeding profusely, and still hacking away at his throat, to all appearance perfectly insensible to pain. The divided vessels were tied, and the hæmorrhage stopped; but he died at the end of a few days, from the secondary effects of the wound.

Baily also, the day after admission, gave me a clear account of many particulars of his case; and I considered him in no danger. The excitement and commotion in the ward consequent on the attempted suicide of Parrymore, again threw him into the most violent delirium, in which he continued for two days. On the fourth day after his admission, I found him very hoarse from vociferations, but tranquil and rational. The straight-waistcoat was taken off, and orders were given that he should be narrowly watched. The same evening, however, he eluded the vigilance of those about him, and threw himself out of one of the port-holes into the Thames. A boat was immediately sent after him, and he was soon picked up, swimming lustily between the Dreadnought and the shore. When in the boat, he struggled violently to throw himself again into the river; and such was his muscular power, that it was with the greatest difficulty the two men in the boat could master him. They succeeded, however, in doing this, but Baily, apparently exhaused by his struggles, almost immediately expired. He was lifted into the Dreadnought a corpse.

We could not examine the body before a coroner's inquest had been held; and as this was not done for some days, and the weather was very hot (it was the middle of July), the body was too far advanced in decomposition to enable us to form a satisfactory opinion of the cause of his sudden death. I believe, however, that he died of pure exhaustion—the consequence of the powerful efforts he had just been making. He was one of the most muscular men I ever saw, and had no organic disease.

These cases, as you might expect, have made me very watchful over patients in delirium tremens. They should not be left a moment unguarded; and in hospitals, where they cannot have a person in constant watch over them, I would always put on a straight-waistcoat, whenever I could do so without using violence, or increasing the agitation of the patient. I make this exception, from a sense of the ill effects of excitement, and of the exhausting influence of great muscular exertion.

But delirium tremens, or at least a condition very similar to that brought on by excessive drinking, may be caused by any great shock to the nervous system, especially by surgical operations, or severe injuries.

When induced by this last cause, it is called traumatic delirium. But its characters are precisely like those I have before described:—nervous agitation, trembling, inability to sleep, and hallucinations, generally of a dismal kind.

The insensibility to pain (which I have before noticed in the case of Parrymore) in these cases is truly remarkable. Dupuytren, who has left a beautiful description of nervous delirium, says, that he has known patients in this state, with a comminuted fracture of the leg, slip off the bandages and walk about, using the broken limb without evincing the slightest pain; and others who had been operated on for hernia, introduce their finger into the wound, and amuse themselves with twisting about the gut, as if they were doing it on the dead body.

He also particularly remarks, as all writers on the subject do, the state of the pulse. He says, 'the most remarkable symptom, in the midst of this disturbance of the intellect, is the calm of the circulation, and the absence of every febrile symptom. You see a patient furious; his face covered with sweat; his eyes glistening; his cries heard at a distance: you believe him affected with the most intense arachnitis. Approach him: his pulse is calm and regular; and the state of his skin removes every suspicion of inflammation.'

But, in other circumstance, you will occasionally meet with a condition of the nervous system very similar to delirium tremens.

In the 19th volume of the Med. Chir. Trans. is a paper by Dr. Seymour, containing three cases of mania, successfully treated by morphia. They all occurred in women.

In the first case the woman became affected, after suffering severe distress, in consequence of the death of a relation who died in her presence. She was occupied with gloomy ideas, and a belief of having committed indescribable crimes. Her nights were sleepless, and there was continual watchfulness, and restlessness of the body. Her pulse was not weak, and her bodily health was unusually robust. She recovered in six weeks, taking a grain of acetate of morphia every night.

In the second case the history is obscure. The woman had been bled and blistered for what was conceived to be inflammation of the lungs. She was extremely violent; fancied that her children were murdered, and their spirits returned to torment her. Her sleep was broken. There was no fever. She recovered under the same treatment.

In the third case there was great previous affliction, and the mania came on after childbirth. The symptoms were nearly the same, and she recovered under the same treatment.

It is impossible not to perceive the analogy between these cases and those of delirium tremens. There is the same absence of fever, the same restlessness, the same want of sleep, and the occurrence of visions and dreams of the same character, in both.

All the instances I have mentioned agree in the absence of fever, and in the regularity of the functions of the body in the midst of the general nervous disorder; in the presence of gloomy ideas and frightful dreams.

It seems, then, probable that opium will be beneficial whenever there is a combination of these conditions. Dr. Seymour says,—'Morphia appears to be of more use in what is termed melancholia, where the mind is tortured by imaginary want, ruin, or crime, than where the derangement partakes of more brilliant ideas: as of superhuman knowledge, dexterity, or wisdom: or than in those cases where one single idea occupies and absorbs the mind.'

I have seen one or two instances in which a state very like that in the cases related by Dr. Seymour, resulted from excessive study.

One was in a man with whom I was well acquainted at Cambridge. He became insane after an attack of scarlatina in the summer of 1828. He had been reading excessively hard, and was much exhausted, when he was attacked with scarlatina on his way to the Lakes, to spend the summer vacation. He was laid up with scarlatina a fortnight; and soon after was placed in an asylum, where he remained two years. At the end of this time he was released, resumed his reading at Cambridge, and took a wrangler's degree in the year after that in which he would have taken his degree in the ordinary course.

The character of his insanity was like that of persons in delirium tremens. He fancied that he was constantly surrounded by devils; and even now, ten years since leaving the asylum, he is convinced of the reality of these apparitions.

My attention has lately been called to another case of the same kind. A man, like the former, became insane after hard reading; and his insanity was of the same character. He was placed in an asylum, where he continued some years. Since his release he has turned author, and the books he has written display considerable talent.

I have little doubt that such cases are allied to delirium tremens—that the insanity is the cause of nervous exhaustion—and that it is best treated by opium, generous living, and quiet; means so efficacious in the various forms of delirium tremens. It would certainly afford a medical man a high gratification to cure a case of this kind—to restore an educated and gifted man to his family and himself; but there is very little satisfaction in curing a man of the delirium that results from drinking, because he is almost sure to get into the same state again. The only chance for him is to become a tee-totaler.

Experience of the 'horrors' has certainly very little influence in deterring sailors from a repetition of the excesses by which they are brought on. Embleton told us that he had had the 'horrors' twice before; and men have often confessed to me that they have often had them as often as seven or eight times. I am afraid, therefore, that Burns' parting advice, in Tam O'Shanter, has been lost on the lovers of tippeny:—

'Whae'er this tale o' truth shall read,
Ilk man and mother's son tak head;
When'er to drink you are inclined,
Or cutty sarks rin in your mind,
Think, ye may buy the joys owre dear;
Remember Tam O'Shanter's mare.'

Dr. Moos, of Vienna, reports in the Austrian Medical Journal, a case of croup where the disease having resisted the most vigorous antiphlogistic treatment, tracheotomy was resolved on. While preparing for the operation, cold fomentations were applied to the head and neck and changed every three minutes, and cold water given the little patient to drink. In three hours a decided improvement was manifest. The treatment was continued, and cold affusions used for two minutes every half hour. In fifteen hours the child was out of danger, and finally recovered perfectly.—[A case very similar to this occurred in the practice of one of our friends.—Ed. L.]

LECTURES ON GONORRHŒA AND SYPHILIS;

BY

JOHN HUNTER, F.R.S.

DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON.

[*From MS. Notes of Dr. Thos. Shute.*]

Lecture I.

VIRULENT GONORRHŒA.

GENTLEMEN:—In describing this disease, those symptoms which constantly attend it, and are most common, will be first spoken of.

The seat of this disease is in the urethra, about an inch or an inch and a half usually from the orifice. It is by far the most frequent place of reception; sometimes, though rarely, it is received on the glans in form of a clap, but then its situation is round the corona glandis, at the junction of the glands with the corpora cavernosa, there the cuticle being the thinnest. In what manner it gets into the urethra is difficult to say; it is supposed to be during the time of coition, but that cannot well be conceived, for the pressure at that time must be every where equal; probably it is received on the orifice at that time, and afterwards insinuates itself. An officer, whilst in Germany, last war, received a severe clap by sitting on a necessary. The necessaries there are of a conical figure, plastered round with lime. One day, after sitting on one of them for a considerable time, when he arose he found something give his penis a pull; on looking at it, he found that a bit of mortar had stuck to his penis, which he removed; a few days after he had a severe clap, although he had not been connected with any woman for many weeks before. The inflammation appears to be of the slightest kind, there being no throbbing, and very little pain, except at the time of making water There are three symptoms which constantly attend the disease; inflammation, pain in making water, and a discharge of matter. In what manner the part is first affected is difficult to say, perhaps differently at different times. The first attack is probably attended with some little pain, though frequently so slight as to pass unnoticed.

At first there is usually an itching at the orifice; this increases, and it soon becomes painful; it is attended with a running and pouting of the lip of the urethra, which has a transparent appearance similar to a ripe Kentish cherry; this arises from the extravasation of serum. This last symptom I think the most certain. The orifice of the urethra is often slightly excoriated, and the glands round it. The urine passes in a small stream, from its canal being tightened, the spasmodic contraction of the urethra and muscles acting less forcibly in expelling it, being retarded by the pain; the stream is often scattered, arising from the irregularity in the urethra; the least irregularity produces this effect, even when it is as low down as the prostate.

The chordee arises from the extravasation of lymph on one side; this, filling the cells of the reticular membrane, prevents the distension on that side, which causes the penis to bend as a bow when erected; the bend is generally downward, sometimes on one side. This symptom is owing to the inflammation being deep seated. It sometimes continues after the disease is gone, when there is nothing venereal remaining. The inner membrane is sometimes torn in erection, causing a considerable hæmorrhage, which frequently greatly relieves the symptoms. The glans at first has a greater fulness than usual, the penis appearing in an half-erected state. The discharge from transparency changes to a watery discolored appearance, sometimes yellow, at other times green, the darkness of color depending on the increased degree of inflammation; when it is of a green color, perhaps, it is mixed with a little blood. As the inflammation abates, the discharge gradually changes to pus. The discharge sometimes smell very offensively; this may, perhaps, arise from its being secreted by an irritated surface. Some say that its smell is of a peculiar kind.

The small glands of the urethra may sometimes be felt in knots. The glands sometimes suppurate, and their ducts are often found full of matter. From the violence of the inflammation sometimes the vessels burst. The discharge and inflammation probably does not extend far; for, if it was to collect at the bulb of the urethra, it would be thrown out in jerks. The bulb of the urethra is so constructed as not to admit of a drop of any thing to rest there; therefore, the last drops of urine, when they reach there, are thrown out by jerks. Such construction was necessary for the evacuation of semen, that it might be thrown out as soon as collected in the bulb: this was the intention of nature in making this part thus irritable; and from its irritability it throws out every fluid in the same manner, though there can be no reason whatever for the urine to be thrown forth in jerks. The muscle, called Accelerator Urinæ, is therefore wrongly named, that not being the intentional use of nature. The matter is only formed, perhaps, where the pain exists.

When the urethra is irritated, all the parts about the pelvis sympathise with it. The patient feels a weariness about the loins and hips, not being able to sit still on a chair, moving continually from side to side to get into an easy posture. Abscesses sometimes form in perinæo. These abscesses, perhaps, begin to form in the small glands, in the coats of the urethra; the bladder becomes irritated, and the urine is often discharged involuntarily, giving great pain from the inflammation of its muscular coat. The action of this muscle is involuntary; therefore, when it begins to contract, we cannot stop its action; but, from the dread of pain in making water, we endeavor to keep it in, and this causes considerable pain. The sympathy is sometimes carried to the ureter and kidneys, giving pain in the loins; and from the kidneys it may be communicated to the stomach, and then to the head; thus there may be a chain of sympathies affecting the constitution. The glands in the groin may be affected sympathetically, causing a bubo, from the irritation of the lymphatics in the urethra. The prostate, vesiculæ seminales, and Cowper's glands, may sympathise with the other parts. The testicle often sympathises with the urethra; the urethra may produce such effects, when irritated from any cause, by a bougie or a stimulating injection.

The inflammation of the testicle is not venereal, and will get well of itself; when it is first affected, it has a pulpy feel, the epidydimis swelling first. The inflammation of the testicle gives a pain in the loins; why such a symptom is produced is not easy to tell. It may be said that the spermatic nerve arises from that part; but we do not find that other parts, when inflamed, give pain at the origin of the nerves; whether it may arise from the testicles having been once situated there, is not easy to determine. The bowels sympathise with the testicles, producing colicky pains. When there is a thickened prepuce, there is often a hard chord continued from it along the penis; what this is I cannot determine, for it is not to be felt at any other time. There never is the same feel from ulcers on the prepuce or glans; it does not appear to be a lymphatic. The varieties of symptoms produced are endless.

The time of the infection appearing, after it has been received, is usually from thirty-six hours to twelve days. A man of fashion, who was married, had not the symptoms come on until four weeks after a connection; during this time he had strange uneasy sensations about his genitals and pelvis, which affected him constitutionally, producing slight rigors and feverish heats; at the end of a month he had the running and other symptoms of a clap come on. In the intermediate time this gentleman was connected with his wife, but she received no injury; which is a kind of proof that the disease can only be received by matter.

Although the disease makes no appearance for several weeks, yet the poison never probably lies dormant for such a length of time. In the case just mentioned, it produced such symptoms as to show it was not inactive. Those who have been clapped frequently, have a kind of fluctuating gleet, which comes on every now and then, causing a suspicion of a recent infection when there is none; half the claps in this town, perhaps, are of this kind. These gleets are something similar to the fluor albus. The same gentleman received a second infection sometime after, and he had the same symptoms preceding those of the clap; in this last it was six weeks after the connection before the symptoms of a clap came on.

REVIEW DEPARTMENT.

Antiquarian Notices of Leprosy and Leper Hospitals in Scotland and England. By James Y. Simpson, M. D., Professor of Midwifery in the University of Edinburgh.

CONTAGION AS A CAUSE OF LEPROSY.

Most modern pathologists seem inclined to call in question the contagious nature of tubercular leprosy, as it at present exists in different parts of the globe.

Cullen, Darwin, and Good are almost the only English physicians of latter times that have admitted the contagious character of the disease, and that not from personal observation. The evidence bearing against the doctrine of this mode of its diffusion is principally of a simply negative kind. In some of the districts in which the malady is endemic, the sick are seen to maintain a free intercourse with the healthy, without the disease being frequently or at all communicated to the latter; the nurses of the lazar hospitals are alleged to remain uninfected; lepers often continue long in the midst of their families without spreading the scourge to any of the other members; and occasionally a husband and wife are seen living in wedlock for years, one of them deeply affected by the disease, and the other remaining perfectly sound. Instances exceptional to these general remarks are certainly occasionally observed, as in a case quoted in a previous page from Dr. Kinnis, of a wife becoming infected subsequently to both her husband and daughter suffering from an attack of the malady. In such cases as this, however, we must recollect, that the repetition of the disease in two or more members of the same family, may merely depend upon the same external or general morbific agencies, acting upon the constitution of all the sufferers.

At least, whenever, from circumstances, this source of fallacy is avoided, the evidence of the contagion of leprosy seems to become more and more defective. Thus, when the disease happens to be imported in the person of an infected individual from a district in which it is endemic, to one in which it is unknown, the malady seems to have no tendency whatever at the present day to spread to any of the inhabitants of the new and healthy locality. Persons laboring under tubercular leprosy are occasionally, for example, sent from southern stations to England and France. In such not unfrequent cases the malady has never, I believe, been known to be communicated in one single instance from the infected person, to those resident inhabitants of the new district, among whom he was living in free and daily intercourse.

Did the leprosy extend and prevail over Europe in the middle ages as independently of propagation by contagion as the perpetuation of the disease seems to be in most localities at the present day?

If we deferred to the mere opinion of the older medical and historical authors, the contagious character of the disease at that era would appear to be undoubted. These authors express an unanimous opinion on its contagious propagation; and it is not till we come down to the professional writers of the seventeenth century, as Fernelius and Forestus, that we find this doctrine ventured to be called in question.

The evidence, however, left us by the older authorities and physicians on this point, is an evidence of opinion rather than of facts. They have bequeathed to us merely their own dogmatic inferences, without vouchsafing to state any of the individual data upon which their general deductions were founded. As far, however, as we may judge by a few loose fragments which we may still gather up from amid the imperfect and scattered records of the disease, the European leprosy, if it were contagious, when epidemic in the middle ages, was at least less so than the combined medical and popular belief of those times would seem to represent. In the Edinburgh hospital in 1590, two of the lepers' wives lived uninfected with their husbands; and a few of the English leper hospitals, as those of Rippon, St. Magdalen, Exeter, and St. Bartholomew, near Oxford, were endowed for the purpose of serving as retreats at one and the same time both for the merely poor and the truly leprous.

Individuals stricken with leprosy were sometimes looked upon by the superstitious spirit of the age as persons directly smitten by the hand of God; and we find in history, traces of rich and noble, and even of royal devotees, endeavoring to expiate their sins, and propitiate the good will of Heaven, by occasionally devoting themselves, and that with perfect impunity, to such duties to the sick as offered the most certain means of calling down the disease upon their own bodies, provided it had been at all so contagious as was generally supposed. Saint Louis (Louis IX.) of France visited the leper hospitals every third month, personally rendered the most abject services to their inmates, fed them, and bathed their sores with his own hands. Henry III. of England is reported to have annually, on Shrove Tuesday, engaged in the same duties. Robert II., the son of Hugh Capet, enacted the devotee in the same manner, imprinting kisses with his lips on the hands of the Lepers (*ore proprio figens leprosorum manibus oscula, in omnibus Deum collaudabat.*) The old English historian, Matthew Paris, relates in his usual quaint and gossipping style, an anecdote illustrative of a similar degree of charitable penance, and defiance of contagion being practised by the Scottish Princess Matilda, the queen of Henry I. of England. Speaking of some transactions in the year 1105, he observes:—

'At the same time David, [King of Scotland,] the brother of Matilda, Queen of the English, came to England to visit his sister, and when, on a certain evening, he came by her invitation to her chamber, he found the house filled with Lepers, (*domum invenit Leprosis plenam*) and the Queen standing in the midst, having laid aside her cloak, she with both hands girded herself with a towel, and water being placed in readiness, she began to wash their feet, and wipe them with the towel, and embracing them with both hands, kissed them with the utmost devotion. Upon which, her brother addressed her thus: 'What is this which you are doing, my Lady? in truth if the King knew this, he would never deign to kiss with his lips your mouth, contaminated by the pollution of the lepers' feet!' and she smiling, replied, 'Who knows not, that the feet of an Eternal King are to be preferred to the lips of an Earthly King? Behold it was for this that I invited you, dearest brother—that you might learn by my example to perform similar actions. Do, I beseech you, that which you see me doing.' And when her brother had made answer, that he would by no means do such things, as she persevered in her employment, David with a smile withdrew.'

In quoting against the alleged strong contagion of the olden leprosy, the preceding instances of complete exposure to the infection of the disease, and yet, at the same time, of complete escape from it in some well known historical personages, let it not be inferred that the victims of the malady were usually looked upon by the general community with feelings of devotion and pious commisseration. On the contrary, the subjects of this '*foedissimus omnium morborum*,' were, as a body, regarded alike by the church and the people, as objects of disgust. The Council of Ancyrus decreed that lepers were only to be allowed to worship amongst the Hyemantes or those public penitents, who, on account of the enormity and turpitude of some of their sins, were obliged to stand in the open air, and not even allowed to come under the porch of the church. The Council of Worms granted to lepers a liberty of receiving the sacrament of the body and blood of Christ, but not with those in perfect health. Guido de Monte Rocher, in his Manual for Curates, states that to some lepers the sacrament cannot be given, because 'non possunt corpus Dominicum sic recipere et tractare in ore suo, quin rejicerent ipsum, sic multi, quibus reciderunt labia et dentes et sunt totaliter corrosi usque ad guttur.'

The preamble to the laws of the Hospital of St. Julian's, drawn up by Abbot Michael, asserts, that 'amongst all infirmities the disease of leprosy may be considered the most loathsome, and those who are smitten with it ought at all times, and in all places, and as well in their conduct as in their dress, to bear themselves as more to be despised, and as more humble than all other men.' The canons of the Church of Scotland, as drawn up in the thirteenth century, deal with the unfortunate lepers more humanely than most other ecclesiastical judicatories, for after recommending them to be admonished to respect the churches of their districts, it is added that, if they cannot be induced to do so, let no coercion be employed, seeing that affliction should not be accumulated upon the afflicted, but rather their miseries commiserated, (*cum afflictis addi non debeat afflictio, sed ipsorum miseriis sit potius miserandum.*' But the contempt displayed towards them seems to have been almost proverbial as late as the age of Elizabeth. Thus Shakspeare makes Margaret of Anjou exclaim to the afflicted and suspicious Henry VI. after the murder of his uncle, the Duke of Gloucester.—

Why dost thou turn away and hide thy face?
I am no loathsome leper, look on me.

Maundrell, one of our early English travellers in Palestine, alludes to some cases of leprosy in terms portraying simply but strongly the fearful effects and character of the disease. After speaking of some cases of leprosy that he met with in his journey, he states, (to quote his own words,) 'At Sichem, near Naplosn, there were not less than ten lepers,—the same number that was cleansed by our Savior not far from the same place, that came a-begging to us at one time. Their manner is to come with small buckets in their hands to receive the alms of the charitable, their touch being still held infectious, or at least unclean. Their whole distemper was so noisome that it might,' (he adds,) 'well pass for the utmost corruption of the human body on this side the grave.'

Various authors have alleged that the institution of leper hospitals, and laws for the separation and seclusion of the infected, were formed more from imitation of the Levitical institutions regarding the leprosy than from direct observation and proofs of the contagious character of the disease. The avoidance, however, and separation of the sick, have been recommended and followed by authors and by communities over whom the Levitical laws could have exercised no influence, direct or indirect, and to whom, indeed, these laws were in all probability totally unknown.

After describing the horrors and course of elephantiasis or tubercular leprosy, the old Roman physician, Aretæus, adds, 'seeing the infected with this disease are such who would not fly them (*aufugiat*), or who would not turn aside from a leper, even although he were a son, or a father, or a brother, since there is fear lest the disease should be communicated (*quum metus est ne morbus communicaretur*). Hence, many have banished those that were dearest to them into solitudes and mountains.'

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, July 9, 1842.

The Stuyvesant Institute School, versus the Cause of Medical Education.

That is certainly a tolerably hackneyed maxim which affirms, *Quem Deus vult perdere, prius dementat*—but it is so remarkably applicable to the recent conduct of the Faculty of the Stuyvesant Institute School of Medicine, that we cannot refrain from its quotation. The unfriendly spirit with which these gentlemen regard the great cause of educational reform, and their belief that medical students are only articles of merchandise, have been very clearly exhibited in their past brief, instructive, and warning career, and have elicited from the profession and ourselves sufficiently marked condemnation. But, although we well knew that our friends were men of *metal*, we really never dreamed that they would manifest the hardihood of declaring *ex cathedra*, and in terms the most unequivocal, that they are the resolute foes of every reform of our systems of education. Well did we know that the tone which we have assumed, with respect to the present state of medical education amongst us, would excite the most rooted dislike of this Faculty; for no other anticipation could be entertained by any man of ordinary sense and knowledge of human nature, than that every sentence expressive of a desire to elevate the character of medical education and the medical profession, would, in the ears of men who were laboring so perseveringly to curtail the one and degrade the other, sound as the most penetrating and smarting personal rebuke. Accordingly we find appended to the last 'annual announcement' of the Faculty referred to, the following remarkably intelligible and characteristic exposition of the sentiments entertained by them on this great question:—

'P. S. The Professors early prescribed for themselves a rule of peace and good understanding with all kindred institutions, and rather to bear any asperity of remark, than to disturb the dignity and harmony of the profession by appearing on the defensive. This principle, therefore, they would more sedulously cultivate in relation to individuals. But since the foregoing announcement was printed and ready for distribution, they have seen the editorial article in the *New York Lancet* of June 4th, in which the whole profession of the United States, and all her medical institutions, are traduced. These aspersions are only a summary of a long and unresisted series of general abuse; the Medical Department of the New York University being in common with others an object of this malevolence.'

The Faculty after having thus expressed themselves, proceed to make a personal attack, which will be repelled in the proper place, and with which we would be sorry to trouble our readers here.

And now, will our readers oblige us by turning to that article which has been thus described, and in it find the appropriate and conclusive refutation of the calumnious misrepresentation with which this Faculty have so attempted to deceive the public, and those members of the profession into whose hands the *Lancet* may not fall? In that article we have re-echoed the sentiments of the most liberal and influential members of the profession respecting the necessity for a reform in medical education. Whilst, with an honest and unaffected warmth, which,—we trust, the great majority of our readers felt,—the subject not only justified but demanded, we deplored the unhappy effect of the limited course of collegiate education to which our students are subjected, and called upon our brethren to seek an immediate reform, did we not also, with equal zeal and certainly greater readiness, vindicate from illiberal and unjust aspersion, the character of the great body of the profession? Did we not say that we had 'a ready answer for any who would insinuate that' the profession in this country 'was wanting in men of the most elevated talent, and most extensive acquirements?' Did we not declare that in every department of medical science, we can point to successful laborers, 'whose works speak in the gate?' Out upon the false and pitiable libellers! Can any thinking man whom we address, believe for one moment, that a medical journal could, under the management of sanity, pursue such a suicidal course? No. Why did not the honorable men of this Faculty present our language to the eyes of those whom they addressed, and at the bar of whose opinion they sought so unjustly to arraign us? Ah! no. That would not have been good generalship,—that would have placed all parties at once in the proper light. Why did they not exhibit our 'malevolence' at full length? When they had in such convenient and condensed form, that 'summary of a long and unresisted series of general abuse (?)' why did they not present it, as overwhelming evidence of our guilt? Oh! no—the gentlemen knew better. They are cunning—but after all, as we have once before said,—their's is the cunning of the goose. They have overshot the mark. Our confidence in the retributive justice of enlightened general Opinion remains unchanged and unshaken. We are very willing that the *Lancet* should be judged by its past career, but certainly we must refuse to own, and must characterize as it deserves, such a tribunal as this Faculty, who, more iniquitous than the tyrant Rhadamanthus,—*castigatque, auditque*,—who first punished and then heard what the sufferer had got to say for himself, not only condemn without a hearing, but refuse to hear even when condemned. But this is not the age, and assuredly this is not the country, in which such persecuting injustice will be tolerated. It is true that several of the members of this Faculty have 'migrated' to these shores from the other side of the Atlantic, but surely they cannot be so ignorant of that generous love of justice and liberty which exists so universally here, as to imagine that one, short, calumnious, and, by the way, ungrammatical sentence, will affect the demolition of such an important cause as that of medical educational reform.

In order to expose still more clearly, the unhappy course which the Faculty of the Stuyvesant Institute School, have thought proper to adopt with respect to the great subject of medical education, and in order to sustain and confirm our views, we beg to invite the careful attention of our readers to the following opinions of some of the most eminent members of the profession in this country.

> 'In many of our American Universities their (medical) degrees have degenerated, and I had almost said, into common certificates of the time of the pupil's attendance, instead of being the testimonial of his abilities or his attainments.'
>
> David Hosack, M. D. LL. D.,
> Introductory Lecture, Coll. of Phys. & Surg.,
> N. Y., Nov. 7, 1825. Essays, vol. iii. p. 103.

> 'I refer to those village schools of medicine' recently established in our country, where they pretend to teach anatomy and surgery without subjects, and the practice of physic without a patient.-
>
> Wm. Jas. Macneven, M. D,
> Professor of Mat. Med. and Therapeutics,
> Rutgers' Medical College, N. Y.
> Introductory Lecture, Hosack's Essays,
> vol. iii. p. 69.

> 'I know, too, the difficulties and obstacles which obstruct their wishes; the reluctance, and in too many instances, the impossibility of parents supplying the necessary expenses, and too frequently the impatience and confidence of young men; but would it not be a less evil, that those who will not, or who cannot afford the necessary expense of time and money to obtain a good medical education, should turn their thoughts to some other profession, than that the health and lives of our fellow-citizens should be committed to the care of such as are *confessedly* unqualified for so delicate and important a task?'
>
> Samuel Bard, M. D.,
> President of Coll. of Phys. and Surg. N. Y.
> *Hosack's* Essays, vol. iii. p. 190.

> 'Notwithstanding the competency of the Professors (in country schools) very imperfect means of education are furnished to the students: this must necessarily be the case, not only from the want of the means of giving practical instruction, but from the *hurried and imperfect manner in which the Professors are compelled to deliver the instruction, by a misnomer called courses of lectures*, that are given on the branches they *profess* to teach.'
>
> *Hosack's Essays*, vol. iii. p. 190.

> 'Dr. Bard has abundantly exposed the *absurdity, to call it by no other name, of such limited means of medical education.*'
>
> *Hosack's Essays*, vol. iii. p. 192.

> 'But the day is fast approaching *when such facilities in obtaining degrees, will be no longer tolerated*, but be done away by the repeal of all the legislative acts relating to medical education, and the profession placed upon the same footing with that of law or divinity.'
>
> *Hosack's Essays*, vol. iii. p. 349.

> 'But how stands the case now? With every facility for the acquisition of the soundest and most extensive knowlege; with hospitals, dissecting-rooms, books, and excellent teachers around him, and standing in the midst of the richest fields of American botany,—the candidate contents himself, after three years of comparative idleness, with a smattering of science, well knowing that the degree awaits his money, and that the world will never know how glaring his deficiencies are. The teachers, on their side, aware that their pupils will not profit the more for their keeping up with the progress of science, write out a course of lectures from the class-books which are within the reach of every student, and during fifteen weeks of each year read them over to their inattentive listeners; and thus discharge the grave task of Professors of physic and surgery. They may quote names and works of merit occasionally to their idle spectators; but knowing as they well do, that no student knows aught of this learning, it is a vain literary parade. This is a

mournful, but by no means an unjust picture of American medical education. The evils of this wretched system cannot be contemplated without a stronger emotion, than mere ridicule is capable of exciting. They speak to the better nature, of national resources neglected, of blasted hopes, ruined health, misplaced confidence, and of life and happiness destroyed, needlessly, wantonly! They tell us of human sacrifices being offered on baser shrines than those of Mars or Moloch!'

Lecture by John F. Gray, M. D.
New York, Nov. 5, 1832, pp. 18, 19.

'The rivalries of the numerous schools for medical instruction, distributed throughout the country, many of them offering very limited courses of instruction—the neglect on the part of most of these schools to require from the candidates any evidence of proficiency in those studies which should form the ground-work of a medical education—the facilities with which degrees in medicine are obtained—the inducements offered to young men to enter themselves as pupils, while they are deficient in the elements of general science, which alone will enable them to study to advantge when their period of pupilage shall have expired, and especially that mistaken liberality of our statute, which, while it gives full effect to the evils above enumerated, is calculated to perpetuate them,—all threaten to degrade and deprave the medical character; and unless this society suggest some decisive measures to arrest this wholesale manufacture of physicians, the consequences must be alike disastrous to the respectability of the profession, and the interests of the public. * * If medical schools were all furnished with commanding talent in the teachers—if they all offered complete courses of instruction—possessed all those facilities for their illustration which are essential to a full education—required such terms of pupilage as are necessary to its acquisition—and if their rivalries were disinterested, except so far as the dignity and usefulness of the profession were concerned, they would be so many sources of gratulation rather than of serious apprehension. But experience has spoken a different language, and as it cannot be misunderstood, we are left without apology if we disregard her lessons. The strife among some of our schools appears to have been, not which should educate the best qualified physicians, but which should graduate the greatest number! And to so great extent has this ignoble emulation operated, that a college has been known to admit to degrees, at one commencement, the one half of its whole amount of pupils; whereas in all well conducted schools the proportion is never permitted to exceed one-fifth or one-sixth part of those matriculated.'

Address of James R. Manly, M. D.,
President of the N. Y. State Medical Society,
in the year 1826.

'All that is necessary in order to the student's graduation, is, that he attend *two* courses of lectures with *tolerable industry*. True, we believe that there is something like a law with the schools, requiring young men to study a year or two with a physician preparatory to attending the lectures; but this law is a dead letter. If the student but attends the two courses, and answers with tolerable facility the questions of an hour, he is forthwith an M. D.

'But suppose these institutions did rigorously require on the part of the student, a year or so of preparatory study? What of it? Student and preceptor both know that the former can pass his examination without such study. The student feels independent, and the preceptor careless; and thus the preparatory study is 'lost time,' or to say the least of it, time not very profitably spent. Indeed, what is there under the present state of things, to stimulate the preceptor to exert himself for his pupil? Neither gain nor glory. Students will not pay for preparatory instruction, when they are aware that the lectures will perform the double office of carrying them in triumph through the green box and draining their pockets. Money is far more important to them than preparatory instruction, and can they be expected to change the former for the latter? * * * There are always those who are not qualified who would take pupils gratuitously, and such men, we admit, can very well *prepare* them for obtaining honors which can be obtained without any preparation at all! * * * We think it proper to make a distinction between our Professors and the schools to which they belong. This is dictated alike by a sense of justice and our own feelings. The former, so far as our acquaintance extends, are worthy of higher encomiums than perhaps our pen can award—we respect them as men, and revere them as philosophers. All this, however, is perfectly compatible with our objections to the present economy of their schools. * * * In a measure so fraught with advantages, we have a right to expect the able and hearty co-operation of the Professors themselves. It is not certain that they would be injured by it even in a pecuniary point of view—because a higher standard of qualification would render more teaching unnecessary. But even if their income should be a little curtailed, we have no right to fear that they are not prepared for a greater sacrifice, if they believe it will be offered up on the great altar of public utility. * * * The state of things in regard to medicine which we wish to bring about, is essentially that which exists in the Old World. * * * To this wise policy England is indebted for her Hunters, her Abernethys, her Coopers, and her Lawrences. This is what we want. * * * What would be thought of placing the legislative, judicial, and executive powers in the hands of one body without check or control? Closely analagous to what this would be in government, is the present condition of medical affairs, and the result is deplorable.'

Circular Letter of the State Medical Convention of Kentucky, Jan. 15, 1842, pp. 9, 10, 11.

In such honorable company then, does the Lancet stand. If we have 'traduced' the 'medical profession of the United States' and 'all her medical institutions,' we have done so in concert with Hosack, and Bard, and Macneven—names which will be held in everlasting remembrance. We have set down as one of the proudest days of our life, that on which we discovered that we had drawn from its murky den the cold-blooded, sneaking, crawling animosity of the most determined opponents of educational reform, and found ourselves so completely shielded from it, by so many of the most illustrious members of the American medical profession.

Besides being thus supported by that 'cloud of witnesses' which we have produced, we beg to remind the profession, and particularly the Stuyvesant gentlemen, that in advocating a more extended and liberal plan of medical study, we are only attempting to carry out the views of the Council of the University of the city of New York, and especially those of the late Chancellor, as embodied not only in public addresses, and formal announcements, but in the actual primary organization of the Medical Department, with its twenty Professorships—its sessions of eight months,—its ordinary and extraordinary chairs,—and all its extended provision for a thorough course of collegiate instruction. Had this noble plan been carried into execution, a standard of medical education would have been raised, which would not have suffered by comparison with that of any foreign country, and to which all other institutions here would have been obliged to conform, or occupy that low place in the public regard, to which they would, by their inferiority and compative worthlessness, have been inevitably condemned. But, unfortunately, that enlightened scheme was nipped in the bud, and of the ignoble part which the present Faculty took in its frustration, and all their subsequent delectable management, the time comes when we shall fully speak.

That we have any feeling of personal ill-will towards this Faculty, we can most unhesitatingly deny. But we would sadly disregard the solemn responsibility of our position, were we to allow any set of men, to drive a loathsome traffic in the best interests of our profession, and the welfare of our fellows, without exposing their criminal and utterly heartless conduct. Had we been disposed to inflict upon these erring and miscalculating men the full measure of the chastisement in our power to bestow, we might have subjected them to a very humiliating exposé. We might have exhibited in all their unseemly and disgraceful features, the domestic quarrels of the Faculty—we might have described the contemptuous and insolent manner in which Professor Pattison spoke of the capabilities and attainments of Professor Mott,—we might have shown how Dr. Mott returned with interest the brotherly affections of his colleague,—we might have reported the cutting sarcasms applied by more than one of the Faculty to the 'Phenomenon' that occupies the Midwifery chair,—we might have described the terms in which a distinguished member of the Council spoke of Dr. Mott, whose connexion with the school he so deeply regretted, on account of his incapacity as a lecturer and his childish and peevish temper,—we might have allowed several of the most intelligent and gentlemanly of the students, particularly those from the South, to express in our columns the disappointment which they had experienced, and the indignant feelings which were excited in their breasts, on discovering the imposition to which they had been subjected,—we might have exposed more fully the *flights of imagination*, contained in the announcements of the Faculty, such for instance as that respecting the number of obstetric cases furnished to the students, ten or twelve students being summoned to one case,—to the great and most unjustifiable annoyance of the poor patient and her friends,—and that the case being then multiplied by the number of students in attendance, was made to appear as ten or twelve cases![*] All this, and more, we might have done, but we compassionately refrained. We wished to give these men a fair trial. Instead of chastisement, we bestowed on them brotherly advice. We warned them,—we entreated them,—we spoke words of encouragement in their dull ears,—we cordially proffered our humble but zealous co-operation, if they acted like sensible, right-hearted men. And even now, at the eleventh hour, we would tenderly beseech them to repent and make one last, and vigorous effort to retrace their steps, and seek the favor of the profession. The warmth of our affection waxes not readily cool, and of the perseveringly adherent nature of our regard, we will yet convince these venerable men, to their most heart-felt satisfaction. 'Ah! dear sirs,' we would say to them, 'do not continue to rush blindly to ruin and dishonor,—do not suffer it to be said of you,

> 'That neither all men's scorn and hate,
> Nor being laughed and pointed at,
> Nor brayed so often in a mortar,
> Can teach you wholesome sense and nurture!'

In the meantime,—we would in conclusion remark,—the duty of seeking by every judicious means, a more extended and comprehensive system of medical education, than that which now prevails amongst us, presses more heavily than ever on all true men in the ranks of our profession. The undisguised hostility of the body, whose improper conduct it has been our painful duty to expose, should add new incitement to every vigorous exertion in the great and vitally important cause against which they are so foolishly and decidedly arrayed. As for ourselves, we can never be driven from the position we have assumed,—through good report and through evil report, we will, to the utmost extent of our poor abilities, maintain the necessity of educational reform; and will joyously treasure up, as so many assurances of the rectitude of our course, every attack with which we may be assailed by such mercenary and interested enemies of the profession and its reform, as those of whom we have on the present occasion so mercifully disposed.

THE MEDICO-CHIRURGICAL REPORTER.

Diarrhœa---Sporadic Cholera---Epidemic Cholera.

The morbid fluxes which proceed from the long tract of mucous membrane that lies between the stomach and the anus are many in number: and they vary much, both in kind and in cause. Hæmorrhages are not uncommon. I have already described the disease called melæna, which is characterized by the discharge of black semifluid matters, resembling tar, from the bowels, and in most instances from the stomach also by vomiting. The matters vomited, and the matters passed by stool, are composed principally of blood, which has been rendered black, and otherwise modified in appearance, during its progress outwards in the one direction and in the other. Again, hæmorrhage from the bowels is apt to occur in continued fever; as I shall show you when we come to that disease. Hæmorrhage takes place also from the rectum in hæmorrhois, or bleeding piles: a malady that falls chiefly to the care of the surgeon. Blood comes away too, mixed with a greater or less quantity of mucus, in dysentery.

The remaining forms of profluvia from the intestinal canal I shall proceed to consider *seriatim;* at least the most important of them.

Diarrhœa.—There are several very different affections classed together under the head of diarrhœa; by which term is usually signified the occurrence of frequent, loose, or liquid alvine evacuations. Thus diarrhœa is a very common symptom of pulmonary phthisis; and this form of the disorder has been already mentioned. It is very often met with also in continued fever, and during the decline of the febrile exanthemata, of which I have yet to speak. But diarrhœa is not unfrequently the main symptom of the disorder under which the patient labors; and constitutes, at any rate, the chief object of our treatment. I shall touch briefly on some of its varieties.

---

[*] We might also have presented a startling commentary on the pious passages in their last 'Circular,' respecting the 'moral discipline' of their school, and the *sincere* expression of thanks to those pastors who kindly offered to the students free seats in their churches!

> 'Oh! for appropriate power to chaunt
> Thy praise, Hypocrisy!'

In the first place, there is that common form of the complaint which proceeds from over-repletion of the stomach; or from the ingestion of food that is not wholesome: food that disagrees (as the phrase is) with the patient's stomach and bowels at that particular time. We may call it, with Cullen, by way of distinction, diarrhœa crapulosa: in which fæces are discharged in a more liquid state, and more copiously, and more often, than is natural. These cases are in truth slight cases of irritant poisoning. The ingesta irritate the mucous surface, and probably the muscular coat also; the secretions of the inner membrane are poured forth in unusual abundance, and the peristaltic motion of the intestines become more strong and active; the objects of these changes being that of getting rid of the offensive substances; a salutary and conservative effort, which we assist and imitate in our treatment of this form of diarrhœa.

The symptoms of which this species of diarrhœa is marked, must be well known to us all. There are often nausea, flatulence, griping pains in the bowels, succeeded by stools of unnatural appearance and odor, and of fluid or watery consistence. There are often, also, a furred tongue and a foul breath: but the disorder is attended with little or no fever; the pulse remains of the ordinary frequency; and the temperature of the body does not rise.

There are certain things which, more than others, tend when taken into the stomach to cause this crapulous diarrhœa: and there are certain circumstances which increase the disposition to be affected by the ordinary exciting causes.

We frequently see this disorder supervene upon a debauch, in which case the mixture of various articles of food, and of drink, each of which in itself might have been perfectly innocent—and the actual quantity of the mixed ingesta—have occasioned the irritation and disturbance. But where there has been no intemperance in eating or drinking, some kinds of food are more likely than others, *cæteris paribus*, to provoke diarrhœa. I do not speak of idiosyncrasies, which show the truth of the old proverb, that what is one man's food is another man's poison, and which cannot be reckoned upon beforehand; but I refer to the average of systems and stomachs. And among these indigestible and irritating substances we may place raw vegetables of many kinds; such as cucumbers and salads, sundry kinds of fruit, especially if they be immature and acid, plumbs, melons, pine-apples, nuts, and so forth. Mushrooms may be added to the list, even when they are cooked. Putrid food, or food which, in the more refined phraseology of gastronomers, is termed high, has the same effect upon some persons: and so, in a particular manner, have some kinds of fish; shell-fish, crabs, and muscles, for instance, in this country; and in other countries, in the West Indies, there are several species of fish which are actually poisonous, and cannot be safely eaten at all. A similar disorder is frequently produced in children by any sort of food, other than the natural sustenance furnished by the mother. The new kind of nutriment disagrees with them: and the very same thing is apt to occur in adult persons. An article of diet which is perfectly wholesome and digestible, and which the stomach bears well after a little habit, will sometimes cause griping and purging, when it is taken for the first time. It is upon this principle that diarrhœa to which Englishmen are subject upon their first visiting the towns upon the continent, is to be explained. I do not know that it is so, but I think it very likely that Frenchmen, and Germans, and Italians, suffer in the same way when they first come to this country, and adopt our habits and regimen.

Another curious exciting cause is to be found in certain mental emotions, and especially the depressing passions: grief, and, above all, fear. A sudden panic will operate on the bowels of some persons as surely as a black dose, and much more speedily. Among the circumstances which predispose most persons to this kind of malady, we may particularly specify season—the hot weather of summer and autumn. And it is probably consistent with the experience of most of you, that the atmosphere of the dissecting-room has a similar tendency.

Now this diarrhœa, from occasional irritation, produced by the presence of substances that offend the stomach or bowels, will generally cease of itself. The purging is the natural way of getting rid of the irritant cause. We may favor the recovery by diluent drinks, and by making the patient abstain from all further use of food which is not perfectly easy of digestion; and we may often accelerate the recovery by sweeping out the alimentary canal by some safe purgative, and then soothing it by an opiate. Or we may give the aperient and the anodyne together, and the one will not interfere with the operation of the other. A table spoonful of castor oil, with six or eight minims of laudanum dropped upon it: or from fifteen grains to a scruple of powdered rhubarb, with half as much of the *pulvis cretæ compositus cum opio*. By some such medication as this, emptying the bowels, and quieting them, the cure is generally accomplished with ease, and speedily: *tuto cito et jucunde*.

We sometimes however meet with cases in which diarrhœa runs on: the stools being composed of fæcal matter in an unnaturally fluid state; and the precise condition on which this disposition to an overloose state of the bowels depends, escaping detection. If the disorder be slight, it will often yield to the astringent and bitter medicines. The infusion of cusparia, and the tincture of cinnamon, supply a convenient formula. If it be more severe or obstinate, we have recourse to chalk mixture, which neutralizes acidity; combined with catechu, which is a direct astringent of the tissues; and with laudanum, which calms irritation. And in extreme cases the sulphate of copper has been found to have a powerful effect in restraining the flux. It is apt to gripe, and should be combined therefore with opium. A quarter of a grain of each, in a pill, given three or four times a day, I have frequently found successful, when previous attempts to remove the diarrhœa had failed.

Sporadic cholera.—I have alluded to the influence of hot weather in predisposing the system to be affected by the exciting causes of diarrhœa. And there is a complaint, of which diarrhœa is one prominent symptom, but which is something more than mere diarrhœa, that shows itself in this country, more or less every autumn, and prevails extensively in some years, as a minor epidemic. It is rightly enough named cholera; for it is attended with, and consists mainly of, a remarkable flux of bile. Sydenham held that the disease is limited to the month of August; and that bowel affections, with vomiting, occurring at other times, are not genuine cases of cholera. But this was one of that great man's crotchets. The symptoms that mark this complaint are vomiting and purging of liquid matter, deeply tinged with, and principally composed of, bile; violent pains in the stomach and bowels; cramps of the legs and of the abdominal muscles; a great depression of the vital powers, and a tendency to syncope or collapse.

The attack is generally sudden. At first the contents of the alimentary canal are evacuated; and then a quantity, an enormous quantity sometimes, of a turbid, yellowish, acrid fluid, is expelled with violence both from the the bowels, and by vomiting. The patients complain of a burning sensation in the epigastrium. As the vomiting and purging go on, clonic spasms of the lower extremities, and especially of the gastrocnemii, occur; the surface of the belly is drawn up into knots: and after a while, the patient, exhausted by the pain and the spasms, and still more so by the copious discharges, grows cold and faint. Sometimes actual syncope happens: and sometimes death.

Death, however, is an uncommon event of this form of cholera, in this country.

The chief cause of cholera, such as has now been described, appears to be casual exposure to cold, after a continued high temperature of the atmosphere: and the great irritation of the stomach and bowels evinced by the symptoms, proceeds from the presence of bile in the intestines in undue quantity, and rendered more acrid than usual by some borbid alteration of its quality. The attack seems to be often determined by some of those causes of irritation which I just now mentioned when speaking of simple diarrhœa; and particularly by imprudence in eating and drinking.

I believe that no better treatment can be followed in this disease than that long ago laid down by Sydenham. He observes that any attempt to stop the purging and vomiting by strong drastic aperients, under the notion of expelling the irritant matter, would be like endeavoring to extinguish fire by pouring oil upon it; and that to try to lock up the acrid discharges in the alimentary canal by means of narcotics or astringents, would be equally hurtful. He therefore was accustomed to dilute the contents of the stomach and bowels by emollient drinks, and injections, especially by chicken broth; and so to favor their expulsion: and when any faintness or sign of sinking began to shew itself, to administer laudanum in full doses. We are seldom summoned to these cases in the outset. Generally the vomiting and diarrhœa have continued for some hours before we see the patient; so that it is expedient to give the opiate as soon as we can. If the stomach be very irritable, solid opium in the form of pill may be preferable to laudanum; or an opiate clyster—or an opiate suppository—may be introduced into the rectum. When the skin is cold, and the pulse sinking or irregular, carbonate of ammonia, or brandy and water, may be given by the mouth; and a mustard poultice, or a bag of hot salt, or a moist and hot flannel sprinkled with oil of turpentine, should be applied to the abdomen. The cramps of the extremities may be relieved by diligent friction with the hand; or some stimulating liniment may be rubbed upon the affected muscles. When the collapse is great, the patient should not be allowed to raise himself out of the horizontal posture, lest fatal syncope should occur. Opium, however, is our sheet-anchor in this complaint: it sustains the flagging powers, while it quiets the gastro-intestinal irritation.

After an attack of severe cholera, the patient is apt to be left extremely feeble; with soreness of the muscles of the trunk and limbs: and sometimes symptoms of inflammation of the mucous membranes will supervene; pain and tenderness of the belly, a white tongue, thirst, and fever. And these symptoms may require some of the remedies of inflammation.—*Dr. Watson's* (*Lond.*) *Chir. Lect.*

On the Treatment of Old Fractures by Division of Tendons.

BY DR. DIEFFENBACH.

Dieffenbach has several times, in old cases of fracture of the patella or the olecranon, where the portions were dragged far apart, divided the adjacent tendon so as to be able to bring the portions together, and, by friction of them one upon the other, to excite such action as might end in the formation of a shorter and firmer bond of union. In some cases considerable benefit was obtained after all other means had failed; in others the result was negative. Two examples are detailed; in one, an old ununited fracture of the ulna, he divided the tendon of the triceps, fixed the upper portion of the bone in its right place by a bandage, and every fourteen days rubbed it well against the lower one: in three months the union was firm. In another example, an old distantly united fracture of the patella, he divided the ligamentum patellæ and the rectus femoris about three inches above the patella; then, by an appropriate bandage, and constantly drawing the separated portions more closely together, he obtained, at the end of some months, a complete hardening of the interposed substance, and a considerable amelioration of the patient's state.—*Brit. and For. Med. Rev.*

Hæmorrhage after Lithotomy.

At a late meeting of the Academy of Medicine, M. Begin read a memoir on the hæmorrhage which occurs after the operation for lithotomy. If we consider the normal anatomy only (says the author) of the parts concerned in the operation of lithotomy, we shall have a very imperfect idea of the cause and frequency of this accident. In many cases the occurrence of hæmorrhage depends on various anomalies in the course and volume of the vessels, and on their dilatation; but in others the bleeding takes place by a sort of exhalation, without the injury of any considerable vessel.

The statistics of lithotomy show, that one out of every five or six patients, who are cut for the stone, die; it would be highly useful if we could determine in what proportion the different accidents that attend the operation contribute to this mortality. This is a very difficult question, and all that the author attempts to do is, to affirm generally that about one-fourth of the total deaths depend on hæmorrhage. Authors lay much stress on the necessity of determining the exact seat of the bleeding, and they give several rules on this point; but M. Begin observes, that it is always very difficult to form any precise idea of the vessel from which the bleeding comes. The author next passes to an examination of the various means employed to arrest the hæmorrhage—viz, pressure, ligature, plugging, cauterization, cold injections, &c. &c.; he affirms that none of these means can be confidently relied on in all cases. He then mentions a process which he has adopted with success in three cases where the bleeding had resisted every other means. In the first place he had the patient placed on the edge of a bed, and made his pupils keep constantly injecting cold water into the wound. After the lapse of an hour the bleeding ceased, and did not return. This method, however, is extremely tedious and difficult of execution; the author, therefore, in a second case, substituted for it the keeping up a constant current of fluid, by means of a tube placed in a pail of cold water.—*Prov. Jour.*

Spontaneous Gangrene of the Neck of the Uterus.

M. Baron communicated the history of the following case:—A female was admitted into La Charité with symptoms of endocarditis; she had no other symptoms of any disease of the uterus except an abundant mucous discharge; about fifteen days after her admission she was seized with severe hæmorrhage from the vagina, and on examination being made a moveable body was found blocking up the entrance of the vulva; this was easily extracted. M. Baron exhibited it to the members of the Academy, who easily recognized that it was formed by the neck of the uterus end the upper well of the vagina. The structure of the parts appeared to he unchanged, but a dark line marked the place at which they had been separated by gangrene. The hæmorrhage did not continue long after the removal of the parts alluded to, and the woman recovered in a short time.—*Prov. Jour.*

Extirpation of the Submaxillary Gland.

BY M. COLSON, OF NOYON.

In has been questioned, especially by M. Velpeau, whether this operation was really ever performed, or whether the supposed diseased salivary gland was not in each case merely a diseased submaxillary gland which was removed seems nearly complete. The patient was 65 years old, and had had for eleven years a cancer of the lower lip, which had been treated by a variety of caustics. At the time of the operation this was as big as a large nut, and was ulcerated extensively; and there was besides, towards the right side of the base of the lower jaw and below it, a lobulated tumor, which was supposed to consist of enlarged absorbents. After removing the cancer of the lip, the author proceeded to this tumor, but was astonished to find that it was situated much more deeply than he had expected, and that, in the removal of it, it was necessary to divide the lingual branch of the fifth nerve, and the submental artery; and to expose the facial artery, the digastric, stylo-hyoid and mylo-hyoid muscles, and the hypoglossal nerve. The operation was with much difficulty accomplished; and the tumor when removed was found to consist of the submaxillary gland (which was recognised by its being still enclosed in a fibrous capsule) and of a few enlarged, but not otherwise diseased, absorbents. The gland was converted throughout into encephaloid tissue, which was in parts softened and nearly fluid; it measured an inch and a half in one direction, and about an inch in the other. The patient rapidly recovered from the operation, and eight months after remained perfectly well.—*Brit. and For. Med. Rev.*

Imperforate Hymen, with Clinical Remarks.

BY MR. ARNOTT.

March 31, 1842. In his clinical lecture to-day, Mr. Arnott remarked that, under the head of imperforate hymen, several morbid affections of the female organs of generation are not unfrequently confounded, simply because in all them the vagina, or passage to the womb, is obstructed. There are cases of true imperforate hymen,—of actual defects or closure of the vagina,—of adhesion of the labia minora covering the entrance to that passage. This last is of frequent occurrence in children, and many are brought to the hospital by their mothers in a state of great anxiety as to their condition; the adhesion seems at first extremely firm and intimate, but by gentle traction and the use of a probe it is readily separated, without abrasion of surface or bleeding; it is merely a gluing together of the adherent surfaces.

This closure of the vagina, or rather the absence of it to a greater or less extent, and which is sometimes improperly described under the name of imperforate hymen, is an original malformation, and a much more serious affection than the latter, from the difficulty of maintaining the new opening or rather passage when made by the surgeon, when this to a certain extent exists naturally, from the risk of failure in making a new passage when this is entirely absent, and from the more frequent occurrence of peritonitis after operations for closed vagina and a fatal termination thereof.

From what is stated in books, you would be led to imagine that instances of imperforate hymen are of frequent occurrence. They certainly are not so. Many practitioners have never met with a case; even those who have had extensive experience, and few have seen beyond three or four. This is the only case which has occurred in the hospital for a number of years. I will then relate the circumstances attending that of Mary Ann Dick, who was admitted last week suffering under this affection, and precisely as they occurred, as many of you had not the opportunity of witnessing the proceedings arising out of it.

On the morning of March 24th, the day on which this girl of seventeen and three-quarters years of age was admitted, I received a note from a medical friend, requesting me to get immediate admission into the hospital, for a young woman, the sister of a servant of his, whom he understood to be in great danger, and who was laboring, as he was informed, (for he had not seen her,) under retention of urine. I gave the order, and found she had been admitted when I came here at the usual hour. It appeared that the girl had enjoyed tolerable good health, with the exception of headachs, for about a year and a half; occurring sometimes monthly, at others more frequently. She had never suffered from pains in the back, loins, or belly, until a week ago. On Friday, the 18th, she was unable to make water, and continued till Monday, the 21st, when a surgeon was called in, who drew it off, and had done so twice a-day, till she was admitted here on the 24th. From the morning of the 23rd she had had most severe pain in the belly, and was unable to keep one moment quiet. I found her in great pain, with a distended and tense abdomen, tender on pressure. In examining this a tumor was detected in the umbilical region, and extending above it, solid, and somewhat movable, and of the size of an orange. At first it gave the impression, from its seemingly isolated character, that it might be a collection of indurated feculent matter; but this idea was no sooner suggested than dispelled, by the consideration that it was not in the ordinary situation of the large intestine. It then struck me, from its somewhat triangular shape, being larger above than below, that it was the uterus; and I asked the girl if she had been unwell lately: to which her reply was, 'I have never been so, Sir.' I at once put my finger between the labia in the direction of the entrance of the vagina, when its progress was stopped by a bulging, smooth swelling there, and the nature of the case was made evident. I now made an ocular inspection, and found the imperforate hymen distended and protruding, in size and form like that of half a hen's egg divided longitudinally, and placed lengthways between the entrance of the urethra in front and the perineum behind. The membrane so distended and stretched was red, smooth, and fleshy, and the swelling firm, but elastic to the touch. It was opened first transversely, and then vertically; and as soon as the bistoury penetrated, the retained menstrual fluid spouted forth in a stream, and continued to flow freely until thirty-six ounces had escaped. A draw-sheet had been placed under her, and into this the rest was now allowed to escape, for I was unwilling to apply pressure to the abdomen, and thereby increase the danger; which in these cases is alleged to depend on the entrance of air into the vagina, and the consequent decomposition and putrefaction of the fluid which is still retained, which in this case becomes a source of great irritation. For this reason, also, the patient was desired to be kept perfectly quiet, and as clean as possible.

In the evening the girl was found free from pain; the draw-sheet had been changed twice, and she now had the third under her. The nurse represented, and the appearance seemed to justify her calculation, that from fourteen to sixteen ounces of fluid had come away in the sheets. The patient had shivered soon after I left, but she was wet; and on being made more comfortable this ceased, and had not recurred.

On the following day, the 25th, she had slept all night, and was free from pain. Made water last night freely, and again this morning. Discharge was small from the vagina.

Nine, P. M. Occasional and recurring pains in the belly; bowels have been opened but scantily; pulse natural in frequency; countenance good; belly feels full, and there is some pain on pressure at the lower part. To have a compound senna draught directly, and the abdomen to be fomented by means of hot flannels soaked in turpentine.

36. Bowels have acted several times; is quite free from pain; belly not tender.

27. Quite easy. The discharge from the vagina has ceased. Here is some of the fluid which was evacuated; it is of the same color and consistence as when discharged; the color approaches closely to that of the electuary of sesquioxide of iron and treacle. You are aware that this secretion will preserve its fluid state in a covered bottle for years.

Where were these fifty ounces of fluid contained? In the distended and lengthened vagina; and it was from its increased length that the uterus was forced up to and above the umbilicus. I am doubtful if any of the fluid was contained in this organ itself.

This patient had subsequently not a bad symptom.' On examination a fortnight after her admission, the opening was found almost closed. It was reopened, and a bougie was afterwards occasionally passed. She was kept in the house for a fortnight longer, in the expectation that menstruation might occur; but as it did not, and the girl was perfectly well, she was discharged, and now attends as an out-patient.—*London Lancet.*

[Our readers will recollect the somewhat analogous case recorded by Dr. Magee in our first vol., No. 15.—Ed. L.]

Efficacy of Oxide of Zinc Ointment in Certain Diseases of the Skin.

M. Martin-Solon has published some remarks on the efficacy of this ointment in the treatment of eczema, ecthyma, and impetigo. The ointment is composed of one to three parts of oxide of zinc, rubbed up with thirty parts of lard, and is used night and morning. The strong ointment may be employed when the cutaneous affection has partially disappeared, and all irritation of the skin been removed. M. Martin-Solon recommends this ointment especially for eczema. Whether the disease occupies an extensive surface of the body, or is confined to certain parts, the use of this remedy almost always removes the unpleasant itching and discharge, and procures a rapid recovery; more particularly if aided by long continued amylaceous baths. In some cases of excoriation and fissures of the nipples, and vulva, this remedy has likewise produced the best effects.—*Journal de Med. Pratique.*

ITEMS AND INTELLIGENCE.

Medical Convention of Connecticut.

The Annual Convention of the Medical Society of Connecticut, was held at the New Haven Medical College, in May last. The number of members is four hundred and four.

Medical Convention of Ohio.

The fifth regular meeting of this primary assembly commenced in the city of Cincinnati, on Monday, the 16th of May, and remained in session five days. Near one hundred members were in attendance, representing many of the interior counties of the State.

Medical Schools of the West.

Next winter, there will be seven Medical Schools in operation in the Valley of the Mississippi and the Lakes. They belong to four States, as follows:—In Kentucky, the Medical Department of Transylvania University, and Medical Institute of Louisville; in Ohio, the Medical College of Ohio, and Willoughby University of Lake Erie; in Missouri, the Medical Department of Kemper College, and the Medical Department of the University of St. Louis; in New Orleans, the Medical College of Louisiana.

The Epidemics among Cattle.

There are now raging throughout the greater part of England and Ireland, and some districts of Scotland, epidemics among horses and cattle of a most fatal character. They are altogether different from those that have lately prevailed. both in the character which they assume and the increased mortality by which they are attended. Sheep are rapidly beginning to be involved in the general destruction.—*Veterinarian.*

Notice to Agents.

Our agents are requested to forward immediately to the publication office whatever copies of the first six numbers of the *Lancet* which may be in their possession. Any person who can furnish us with any of those numbers will receive full price for them.

To Correspondents.

From the length to which our defence of medical education, against the attacks of the Stuyvesant Faculty, has extended, several valuable and interesting articles are unavoidably postponed. We trust, however, that our correspondents and readers will, in the case, hold us excused for allowing any one article to occupy so much space. The reply to the assaults of the Faculty referred to, will be circulated extensively in the form of a circular, and we would respectfully solicit the aid of our friends and subscribers in obtaining for it the widest circulation. Five thousand copies will be distributed amongst our several agents, who will be instructed to supply all the medical men within their reach.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending June 25, 1842.

32 Men, 28 Women, 46 Boys, 33 Girls. Total, 139.

DISEASES.

Apoplexy	0	Intemperance	0
Asthma	0	Inflammation	1
Asphyxia	0	Of liver	4
Abscess	0	Of bladder	1
Aneurism	0	Of brain	5
Bleeding	1	Of stomach	2
Bleeding from stomach	0	Of chest	6
Bleeding from lungs	1	Of lungs	9
Burned or scalded	0	Of bowels	6
Casualties	2	Of heart	0
Cholera infantum	4	Of kidneys	0
Cholera morbus	0	Insanity	2
Cancer	0	Jaundice	0
Consumption	32	Killed or murdered	0
Convulsions	11	Lues Venera	0
Croup or hives	0	Mortification	0
Debility	0	Malformation	2
Delirium tremens	0	Marasmus	9
Diabetes	1	Measles	1
Diarrhœa	1	Old age	0
Death from poison	0	Organic disease of heart	2
Dropsy	0	Palsy	0
Dropsy in head	8	Rupture	0
Dropsy in the chest	9	Rheumatism	0
Drowned	0	Spinal disease	0
Dysentery	1	Suicide	0
Erysipelas	1	Sprue	0
Epilepsy	1	Small-pox	2
Fever	2	Scrofula	1
Scarlet	11	Teething	0
Typhoid	5	Tumor	0
Puerperal	0	Unknown	1
Remittent	1	Ulceration of throat	1
Bilious	0	Ulcers	1
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	0
Fracture	0	Worms	0

AGES.

Of 1 year and under, 33; between 1 and 2, 10: 2 and 5, 15; 5 and 10, 8; 10 and 20, 6; 20 and 30, 17; 30 and 40, 13; 40 and 50, 12; 50 and 60, 6; 60 and 70, 2; 70 and 80, 3; 80 and 90, 0; 90 and 100, 1; 100 and upwards, 0; unknown, 0.

William A. Walters, City Inspector.

City Inspector's Office, June 26, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, JULY 16, 1842. No. 3.

LECTURES.

A COURSE OF LECTURES

ON

Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XV.

Laryngitis—Pathology—Treatment—'Clergyman's Sore Throat'—Pathology—Treatment.

GENTLEMEN:—

I shall speak to-day of laryngitis. The larynx is, you are aware, the principal organ of the voice, and is composed of a number of moveable cartilages connected together by means of ligaments, and moved by appropriate muscles. There is one anatomical fact respecting the larynx to which I desire to call your particular attention, and that is the peculiar arrangement of the mucous membrane of the organ. When you trace it down from the fauces you will find that it lies very loosely attached, and you can raise it by means of a forceps with the greatest ease. But as soon as you get fairly down below the vocal chords, you find that the union of the mucous membrane with the subjacent cellular tissue becomes extremely intimate, so much so that their separation is affected with great difficulty. Now the importance of a knowledge of this fact you will very soon perceive. [Dr. S. here demonstrated the parts on the subject.] This organ is occasionally the seat of acute inflammation, and when in such cases you examine the parts after death, you will find ample evidence of this state of things. In the first place, you will find that the mucous membrane is of a bright red color; the mucous membrane lining the ventricles is always in such cases red and swollen, and sometimes somewhat softened, though this change is comparatively rare. You notice that this extends a little into the fauces, and more or less into the trachea; but usually it is about the glottis that these appearances exist most extensively. This change, which in most cases is not very strikingly marked would amount to very little, if it were the only change. But we notice in all these cases a change greatly more important, and that is the effusion of serum, commonly into the sub-mucous cellular tissue, and you can easily see that it must accumulate about the ventricles of the larynx and the glottis, and so obstruct the passage at its narrowest point. The great importance of the anatomical fact to which I directed your attention a moment or two since, will now be evident.

But this effusion of serum is not the only additional change which we notice in these cases In severe forms of the disease we have an effusion of lymph, and in cases still more severe we may have an effusion of pus, both however leading to the same result—that is increased swelling of the parts about the glottis, obstruction of the respiration, and finally suffocation of the patient. Indeed the mere effusion of serum is just as rapidly fatal in many cases, as if pus or lymph existed there,—the intensity of the inflammation not being the cause of death, but the obstruction to the respiration caused by the effusion. When lymph is effused the swelling is much harder than when serum only exists; and when pus has formed the part has a yellowish appearance, and frequently the pus filtrates its way through into the cavity of the larynx. Sometimes little eschars are formed, which give way and admit of the passage of the pus, and produce ulcers. Primitive gangrene, as it is called, is very rare in this acute inflammation, the only approach to it being those little eschars which I have just described as permitting the discharge of the pus. These effusions may also take place about the external parts. We frequently find effusions of pus, lymph or serum into these parts, which tend more or less to compress the larynx, and interfere with its functions. We also usually find, on examining patients who have died of this disease, that the lungs do not collapse, but remain more or less distended, and this is owing to the air having been confined in them, and the air vesicles being more or less distended during life. A considerable accumulation of frothy mucus in the air passages is likewise usually found.

Now this acute form of the disease, of which I have just been speaking, is comparatively rare. Many of you may go through life without meeting a single case of it. But such cases do sometimes occur, and they are of most absorbing interest, for they are almost uniformly fatal, and that in a very short time,—generally in a few hours, and hardly ever longer than twenty-four. With respect to the causes of this disease we do not know a great deal. When it occurs in an indiopathic form it comes on suddenly, and often in constitutions which would not be at all suspected as liable to the attack. In many cases it occurs in connexion with erysipelas—particularly when that disease attacks the face and neck. Again, it has been noticed in connection with other eruptive diseases, such as small-pox, measles, scarlet fever, and it has also occurred during the course of continued fever. The irritation of irritating gases may also produce it. Dr. Marshall Hall, has, if I recollect right, related four cases in one family produced by the steam of boiling water. The children drank the water in play; it did not produce inflammation of the œsophagus, as in all probability the water did not get so low, but intense inflammation of the larynx was the result. But as I remarked, already, in the great majority of cases we do not find any particular cause to account for the occurrence of this state of things.

A person attacked with laryngitis usually experiences more or less febrile excitement, but generally not very strongly marked. The first symptom of which the patient complains is slight soreness of the throat with difficulty of swallowing. After this has continued for some hours, he experiences difficulty of respiration, and the voice becomes more or less hoarse. A sensation of stricture with pain, not very acute, and tenderness about the region of the larynx are also experienced. This state of things goes on from worse to worse until the voice becomes entirely lost; the inspiration sibilous, as if the air were drawn through a piston; a dry tickling cough ensues, and at intervals paroxysms of threatened strangulation; the face is flushed and livid; and the difficulty of breathing extreme. The patient soon becomes of a deathly paleness and is bathed in a profuse sweat, the pulse is extremely feeble and accelerated; the extremities become cold, and the unhappy patient dies in a few hours literally suffocated.

The treatment of the disease is not, in my opinion, very well settled. The truth is, that in a great majority of instances, the disease proves fatal despite of all that can be done. Authors, however, who have treated of this affection, have recommended free blood-letting, and that not at all in proportion to the febrile excitement. You must bleed, they say, not because there is a strong pulse and heat of skin, but because, unless the disease is checked at the very onset, it will rapidly progress to a fatal termination. Free depletion, then, tartar emetic, mercurials, leeches applied, not exactly over the larynx, but on the neck on one or other side of it, are the remedial means to be chiefly relied on in these cases. But as Mr. Lawrence has very justly remarked,—and those who know anything of this gentleman's treatment of inflammation, know very well that he does not spare depletion,—if this treatment does not *soon* relieve the patient there is great reason to fear that nothing but an operation can be of any avail; and that operation is the common one of tracheotomy, or laryngotomy, as the case may be. Mr. Lawrence thinks that the operation should be performed much more frequently than it is, and also much sooner than in most cases in which it is done, for although the respiration may be perfectly re-established, yet the reaction on which the ultimate recovery of the patient depends, will not ensue and death will necessarily follow. With regard to the performance of the operation in cases where it is required, let me make one remark, which is very important and has immediate connection with the subject of auscultation. It not unfrequently happens that the patients are operated on for the extraction of some supposed obstruction in the larynx, and no benefit at all is produced. It becomes then of great practical importance to the surgeon to ascertain beforehand whether an operation is really necessary or not. It must be evident at once that if the difficulty be below the larynx or trachea, no operation can be of service. Now this can be easily ascertained by listening to the respiration. If you are called to a patient who is laboring under intense dyspnœa, and the question arises respecting the propriety of an operation, apply your ear to the posterior part of the chest, and if you hear the respiratory murmur distinctly, then no good can result from the performance of the operation, as the air evidently finds an unobstructed entrance. But if you find that respiration all over the chest is either very feeble or entirely gone, you may be sure that the obstruction is above the bifurcation of the trachea, probably in the larynx, and that therefore the operation will be useful. By recollecting this simple fact the unpleasant error,—into which I knew a very distinguished surgeon to fall,—of operating when there could be no hope of success, will be avoided.

I will now proceed to say a few words respecting chronic laryngitis. This is comparatively a very rare affection, and is in most cases a complication of phthisis, and is connected with syphilis. The former is a common affection. How many cases of this sort do we meet with in our Hospitals! But I imagine that very few cases with a syphilitic origin have been met with. Some years ago I had charge of a large Dispensary, and from what I observed there, I am inclined to believe that the latter form is rare indeed.

I shall not now attempt to describe the pathology of the disease, as complicated with phthisis, but will do so when I come to the latter affection, and then I shall go fully into the subject.

But I wish to speak here of one form of chronic laryngitis with which we sometimes meet, and which possesses great interest. It is perhaps rather subacute than chronic—it is called 'the clergyman's sore-throat.' Those of you who have read our journals within the last few years, must have observed a good deal remarked on this subject, and in my opinion a great deal of foolish remark. Some for instance have supposed that the use of tobacco was the cause of this complaint, and various other causes have been enumerated. Now I think that any one who has a case of this sort must have been struck very forcibly with the real cause if they examined the case with any degree of proper attention. I believe that in the great majority of cases the affection is produced in the following manner: A public speaker contracts a common catarrh, which is, you are aware, in its early stages, accompanied by more or less hoarseness; during the continuance of this the patient is obliged to preach or speak in public—for the disease is not confined by any means to clergymen, for actors, public singers, and all who are obliged to exercise the voice much in public may be subjects of it,—thus day after day the hoarseness is increased, and finally the disease becomes fixed on the larynx, producing the peculiar affection in question, and which is, I believe, nothing more than simple thickening and increased vascularity of the mucous membrane,—just enough to produce hoarseness, oppression of the respiration, and perhaps in cases where disease advances farther, more or less complete loss of voice. But I believe that there is occasionally an important complication—that is dyspepsia. The individuals who are the subjects of this affection are of sedentary habits, and dyspeptic,—and dyspepsia, we know very well, often produces irritation about the throat. Frequently in such cases the cure of the dyspepsia is followed by the speedy disappearance of the difficulty in the throat.

Now this affection usually commences with slight soreness of the throat and difficulty of swallowing; the voice becomes gradually hoarse, and in some cases is almost entirely gone; there is more or less tenderness about the region of the larynx, with a peculiar sensation of dryness about the throat, as if there were a deficiency of the natural secretion; and there is usually a hoarse dry cough. The pain is not very marked or characteristic, and is often absent entirely. There is also a wheezing more marked during expiration than inspiration. There may also be in some cases a sort of paroxysm, the duration of which may vary very much, and indicating a more severe form of the disease than that in which this symptom is absent. There is no loss of appetite,—no febrile excitement,—the general health remains unaffected. There is this slight but unpleasant local difficulty which is just sufficient to prevent the patient from the exercise of his profession, and which of course demands the strict attention of the physician.

The treatment is very simple in the majority of cases, and the prospect of cure considerable.—Where the affection exists as a simple disease, in persons of healthy constitution, it is very easy indeed to cure it. No one would think of bleeding in such cases, but many of you may suppose that a moderate antiphlogistic treatment, leeches, blisters, demulcents, and so on, would be proper and beneficial. But in truth this is not the appropriate treatment at all, and is calculated to aggravate rather than cure the disease. Sometimes, however, the application of leeches is useful. I had last year a case in which leeches alone appeared to effect a cure. This case was that of a clergyman of this city, of apoplectic habit, and who had had several escapes from fatal determination of blood to the brain. He came here several years ago for the purpose of delivering an address before the New York Lyceum at the Tabernacle, and being obliged to exert his voice more powerfully than usual, he suddenly experienced a sense of constriction about the throat, which forced him to desist at once from speaking. He was eventually cured by the repeated application of leeches, and nothing else. In this case there was probably a great congestion of blood about the throat. The best treatment in most cases is the adoption of a mild mercurial course. No fact deserves to be more forcibly impressed on your recollection than that such cases are best cured by a mild mercurial course. Irritating injections into the larynx have of late years been strongly recommended by some French physicians, and perhaps you learn with some surprise that such injections may be thrown into the larynx without producing death. But by the statements of these gentlemen it appears that this can be safely done. Injections composed of a solution of the nitrate of silver or of the sulphate of copper, have been applied to the larynx by means of sponge fastened on a piece of curved whalebone. The moment that the sponge touches the fauces the larynx becomes, as you will at once conceive, elevated and the fluid is expressed. This mode was however found unsatisfactory, unless when the disease was seated at the upper part of the larynx, and they accordingly employed, in cases where the disease was lower down, a syringe, and injected the larynx just as you would the urethra. Either of these operations, however, require great tact and skill, and I do not know that the results of this mode of treatment have established any decided superiority over those which prevails with us.

LECTURES ON GONORRHŒA AND SYPHILIS;

BY

JOHN HUNTER, F.R.S.

DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON.

[*From MS. Notes of Dr. Thos. Shute.*]

Lecture II.

GONORRHŒA IN FEMALES.

The disease in women is not near so complicated as in men, their parts being much more simple. This is one reason why the disease is not so easily known in them as in men. A second reason is their being very subject to a disease which is very similar—the fluor albus. This disease is so much like it, that it is impossible to distinguish one from the other by appearances only. The discharge increasing is no proof, nor the color; for the fluor albus is sometimes yellow, and changes to green, likewise varying in quantity. The only rule we have to go by is the preceding circumstances and consequences. That is, if she has been known to be connected to an injured man, or has infected one. But such circumstances are no absolute proof, for it is very possible for a woman to have such connection and receive no injury, and from such connection to communicate it to another person who cohabits with her, without receiving it herself, the matter being lodged in the vagina. Therefore there does not appear to be any symptom or testimony which can absolutely prove that a woman is clapped.

The symptoms of the disease will be according to the parts which are concerned. Sometimes it causes very disagreeable sensations; the labia, nymphæ, and orifice of the urethra become sometimes exceedingly sore, not bearing to be touched; all the urethra becomes inflamed, and gives great pain in making water. The vagina is not a very sensible part; therefore, when the disease is only there, it causes little pain. The inside of the labia, nymphæ, and clitoris have great sensibility, similar to the glans in males, therefore, when they are inflamed, they give great pain. The symptoms in females are milder, from the parts undergoing no change, except in making water, which is not the seat of the disease in them; whereas, that being the seat in males, and the frequent changes which the parts undergo from involuntary erections, very much aggravates the symptoms, and chordee, swelled testicles, &c., which are symptoms that cannot exist in females. Sometimes they have the bladder sympathising with the urethra, as in men. Some authors have spoken of the ovaria swelling, but this I do not credit.

A man having a clap after being connected with a woman is no proof that he received it from her; it should not always be attributed to the last connection, because it might have been caught in some preceding connection. No proof can be had of a woman's injuring a man but from a man of veracity, who assures you that he has had no connection with any other woman for many weeks before.

A gentleman who had been clapped took a kind of aversion to the disease, and was determined in his own mind never to get the disease again; he therefore provided himself with a cargo of machines to take with him to Turkey, where he was going as a volunteer to join the Russian army, which was then at war with the Turks. On his return to England he still continued the same precaution. He became acquainted with a celebrated lady, who was kept by a nobleman's brother; with this lady he had frequent connections, but not without the use of his machine; he being very intimate with her keeper, and finding that he had no complaint, he one day thought he might venture without any precaution, the consequence of which was that in a few days he found he was clapped; this was four years after his former clap. He applied to me, and desired I would examine the lady, which was likewise her own request, fearing that she might injure her keeper. I went without giving her any notice, that she might not have an opportunity of cleaning the parts, and I could not find that she had the least symptom. I desired that she would acquaint me in confidence whether she had connections with any others beside her keeper and his friend; she assured me she had not, except with a merchant in the city, who was a married man, and she believed was not injured, nor her keeper neither. Such instances as these are frequent, and how it happens is difficult to determine. Her keeper or the merchant might have been connected with another woman, have received some venereal matter, and have deposited it in the vagina of this lady without its affecting either of them, and this gentleman, who was injured, might have received it in that manner. Another way of accounting for it is, by supposing that she might be injured without knowing it, and that her keeper and the merchant did not receive it from being accustomed to such stimulus; and that the third gentleman caught it from not being habituated to it for four years. Whether the disease can continue in a slight degree in women for many months, without wearing itself out, is not certain, but if it is so in them it is different from what it is in men.

From some very strong proofs, it appears that the disease is capable of going on in women for years, and that unknown to themselves. The venereal matter in women is very apt to run down the perinæum, and produce chancres about the anus, and claps sometimes. This disease is entirely local in both sexes, but the constitution frequently sympathises with it, causing small rigors. This is most frequent in those who have the suppuration late.—When there is pain in making water from an inflammation of the meatus urinarius, and a discharge from that part, it is a pretty certain symptom of infection; but it requires a very nice examination to discover from whence the discharge comes. The carunculæ myrtiformæ, being very sensible parts, become very painful when inflamed. From some cases which have come under my notice, the disease appears to continue in the vagina for years, without apparently affecting the patient, although capable of infecting another. If so, it is very different from what it is in men, for there it always wears itself out.

Lecture III.

TREATMENT OF VIRULENT GONORRHŒA.

The cure of the disease will be treated of under a supposition that it is a specific inflammation. If we, by any means, can destroy the disposition in the solids to produce such action, then we shall at once stop the running, at least the formation of venereal matter. When the disease lasts long, it shows the patient to be very susceptible of the venereal irritation; perhaps such people are of an irritable habit in general. In all cases of men, without exception, time is a specific, every one getting well. In curing the disease, it is seldom that any good can be done; not above once in ten cases. In most, they will do equally as well with bread pills as any other application.

There are two modes of cure, the internal and local.

There are two modes of cure internally; the evacuant and astringent. In evacuating, purges and diuretics are used; for purging, some use mercurials, and others as carefully avoid them. This disease is an accident, sometimes superadded; all constitutions whatever are subject to it. This is not the case with most diseases, for in general the constitution must be in a particular state to be susceptible of the disease, as in the ague, that being only capable of attacking a particular constitution. In such diseases, therefore, the constitution is to be taken up, as we have no specific for such diseases. Mercury is frequently given in this disease, from its being a specific in the pox, from which it might be naturally supposed that it would cure the disease when local. But, notwithstanding it is a specific in one case, it does not at all forward the cure in the other. The astringent method of cure is by giving some of the balsams. These will stop some irritations, but I doubt of their having any effect on the venereal.

The local method of cure is in two ways—internally applied to the urethra, or externally on the glans, and sometimes both. Every stimulus which is not venereal tends toward a cure, because any other stimulus produces a different action, and as far as it deviates from the venereal action, so much nearer it is towards producing a cure. The superadded irritation is not venereal; every increased action, produced by stimulating the part, tends to destroy the specific inflammation. The topical applications may be either in a solid or fluid form. The solid, when internally applied, must be in the form of a bougie; such usually irritate considerably. It is usual to wash off the matter and keep the parts clean, to prevent irritation. The matter is likewise carefully wiped off wounds for the same reason; such treatment is quite unnecessary, for matter can never irritate the part which secreted it. It is sometimes necessary to remove the matter for the application of topics, otherwise they cannot act, the part being so completely covered by its own matter. Injections have an immediate effect only, their operation ceasing soon after application; therefore, to do good with them, it is necessary to apply them very frequently; every hour, or oftener, will perhaps be necessary. All astringents act in the same manner; their powers are similar in all. There are many injections which almost immediately stop the discharge. This has alarmed some people, they thinking that the matter would be thrown into the constitution. But such opinion is absurd, for the disease can only be carried into the constitution in the form of pus; therefore, if the formation of matter is stopped, it is impossible that the patient should be poxed. The chance of absorption is in proportion to the duration of the discharge. If the discharge continues four weeks, it is four to one more probable that the patient is poxed, than if it continued only a week. Every day that the discharge continues the probability becomes greater of the patient's being poxed. If, by any means, the venereal inflammation can be removed, then there can be no danger of the constitution becoming affected, because the discharge can be no longer venereal.

Injections are of several kinds; the irritative, astringent, sedative, and emollient. The first cures by producing a greater irritation than the venereal, and thus changing the action. This method increases the symptoms of inflammation and discharge. It is difficult to determine on what method of treatment to pursue in different people. Where there is a great degree of irritation, perhaps this method should not be used. It may be attended with better success in those who are not of a very irritable habit. When the glans is much inflamed, and all the symptoms are very violent, the irritating mode of treatment probably will do hurt. We are sometimes able to stop the discharge entirely from the first, but when that is the case, the pain and inflammation continues as long, or perhaps longer than it would have done, had the discharge been suffered to continue. This advantage, however, is gained; it prevents the possibility of a pox. Astringent injections generally irritate in some degree; therefore, sometimes they increase the discharge, at other times entirely stop it. If we could stop the discharge immediately as it comes on, then we should entirely prevent the possibility of a pox; but we know of no such astringent; probably the best astringent is not known. Sedatives lessen the action of the parts, and prevent their being so susceptible of pain; therefore they have a very comfortable feel. Emollients lessen the pain by lubricating the parts. They likewise cleanse. When the glans is affected, then external applications may be useful; mercurial ointment will be a good one. When the prepuce or glans are considerably inflamed, fomentations and poultices are necessary.

Injections.—Corrosive sublimate dissolved in water, one grain to eight ounces is a proper proportion for some people, but for the quantity we must be regulated by the sensations of the patient; in some this will be too much, in others not sufficient. To this some gum arabic may be added. Turbith mineral is another, which should be made by dissolving as much of it as possible by boiling; to this an equal quantity of water should afterwards be added, and it will be fit for use. Verdigris and oil is another injection which is frequently used, and with good success. For astringent injections, white vitriol, saccharum saturni, and bark are used.

Spa water may also be used as an astringent.

Sedative, opium perhaps is the best. The opium should be dissolved in water. By dipping the penis in a sedative fluid, it may give ease.

For an emollient, gum arabic and oils are frequently used.

When there is hæmorrhage far up in the urethra, balsam of copaiba is a very good medicine, generally stopping it. This is a symptom which is never attended with any bad consequences. I am inclined to think that injections sometimes cause this hæmorrhage. In a chordee, bleeding is sometimes very useful, especially topical bleeding with leeches. This symptom frequently remains after all venereal affection has entirely ceased, owing to the extravasated lymph not being taken up: in such case bleeding will be of no use, it being only necessary to get the lymph absorbed, which may be perhaps best done by the use of mercurial frictions. When the bladder sympathises, an opiate clyster generally relieves very much, and bleeding is sometimes necessary. It perhaps rarely happens that the bladder becomes inflamed by sympathy; therefore the little use which results from warm bathing and bleeding in such cases when used.

In swelled testicles, the horizontal posture, above all things, is the most useful; it takes off the action of the arteries, and facilitates the return of the blood through the veins. This is a species of inflammation which very rarely comes to suppuration. Emetics in some cases are useful. When the inflammation has ceased, a considerable tumefaction frequently continues some time after; in such cases mercurial frictions are best to promote the absorption of the extravasated lymph.

Cure of the slighter degrees of Strabismus without Division of the Muscles.

Dr. Dieffenbach states that he has cured the slighter degrees of strabismus by snipping off a piece of the conjunctiva with the subjacent cellular tissue, near the insertion of the rectus muscle on the side from which the eye diverges. He states, that a larger piece of the conjunctiva must be removed when the eye is turned outwards than when it is turned inwards, because when the eye is turned inwards it is generally occasioned by the greater power of the internal rectus: but when the eye is turned outwards there is generally paralysis, or, at least, a weak state of the rectus internus.—*Wochenschrift fur die ges Heilkunde*, 1841, p. 581.

REVIEW DEPARTMENT.

Memoires de l'Academie Royale de Médecine. Tom. IX. pp. 796. Paris: Baillière, 1841.

The present volume of these valuable Memoirs is unusually interesting. Among the papers which it contains is one 'on Menstruation,' by A. Brierre de Boismont, which obtained the prize of the Academy in 1840. The author divides the subject into two sections—the physiological and the pathological. The former does not present much that is new of importance, and is chiefly occupied by statistical details. Of the remarks on the pathology of menstruation, we present the following summary which we find in the *Med. Chir. Review* :—

AMENORRHŒA.

This may be—1. Primary, as when at the proper period the secretion does not appear: when, however, no symptoms present themselves no means need be adopted; but when the flow is impeded by a congested condition of the uterus, depletion and baths will be found very useful. 2. Local, when an occlusion of the uterus or vagina exists. 3. Secondary, or amenorrhœa from suppression.

Of 190 cases, the causes of suppression were physical in 68, moral in 92, and unknown in 30. Of all physical causes, the operation of cold is the most frequent, although habit may overcome this, as is seen in the bathing women; while, in some idiosyncracies, cold has provoked an excess of the discharge. A temporary amenorrhœa often succeeds inflammatory diseases, treated by depletion, and may also appear during the convalescence of typhus fever. Many medicines also produce it, and especially copaiba and cubebs. Circumstances often modify liability to it in the same individual; thus, menstruation was suppressed in a lady by the application of a few leeches to the epigastrium, while the loss of an enormous quantity of blood from 160 leeches, by the same person, did not, on another occasion, produce the same effect.

In the treatment recommended, the author relies chiefly upon local and general depletion and warm baths. He thinks, however, other means may be necessary; but, he would seem to be little aware of what these are, since he quotes as a novelty a case in which the pil. aloes c. myrrhâ was given with advantage.

DYSMENORRHŒA.

This is chiefly found in towns, and Lisfranc states that it is often hereditary. Our author conveys no additional information respecting this disease, but he has some interesting observations upon some of the ailments afflicting the inhabitants of convents. The life of the cloister only commences after menstruation is established, but it is very rare not to find after some years a notable diminution in the quantity of the secretion. The period is usually very exactly observed, but with most nuns a mere show for 24 hours occurs, which, however, slight as it is, seems necessary for their health. Their digestive organs are never in a proper state. There are no acute or gastralgic symptoms present, but rather an inactivity of stomach, accompanied by a sensation of general debility and sinking in the epigastric region. These women, full of the best intentions, are continually struggling against physical debility.

Tonics and stomachics are useless, and often hurtful. A slight papillary redness of tongue gives rise to the belief in the existence of a sub-acute gastritis, or a hyperæmic irritation of the mucous membrane of the stomach, and laxatives, alkalies, and rhubarb, are found very useful. This state of the digestive organs alternates commonly with leucorrhœa, and experiences a sensible remission during, and a few days after, the menstrual period. Vicarious hæmorrhage, and especially hæmoptysis, is often present, from which the general health suffers little, and tubercle does not follow. The nuns are also very liable to diarrhœa, otorrhœ, and obstinate cutaneous affections. These women, although in a bad state of health, frequently live long, and are not liable to acute disease or cancer. Phthisis, however, especially in those convents in which the discipline is severe, carries off a great number.

CHLOROSIS.

There are many reasons to believe that chlorosis is a general affection, produced by changes in the quantity and quality of the blood, and analysis proves this fluid to be defective in cruor and iron. Other facts point to the nervous system as being primarily affected; thus, the division of the pneumo-gastric nerve defibrinates the blood, syncope lessens its power of coagulation, and almost any moral impression modifies the sanguification.

It would seem that occasionally chlorosis is a local affection which re-acts upon the general economy; thus, there are young persons in whom menstruation, which has been in vain solicited by tonics, iron, &c. appears immediately after marriage or pregnancy. Other girls presenting all the signs of chlorosis are at once cured by the mere local stimulus of sexual intercourse; while, in other cases, the affection seems to follow unavailing efforts at menstruation. Although chlorosis often accompanies amenorrhœa, yet the two are not necessarily co-existent; for, besides the fact that chlorosis occasionally occurs in man, so also it may be found in various states of the menstrual function. It cannot always be said to be asthenic, for it sometimes occurs in females possessing all the attributes of power.

VICARIOUS MENSTRUATION.

This is chiefly observed to proceed from the mucous membranes and the skin. It is seen as often in the plethoric as in the feeble woman. The stomach, lungs, and hæmorrhoidal vessels are those which are especially liable to become affected, although any feeble organ, or one to which irritation has been applied, may suffer.

In early life the upper, and later in life the lower parts of the body are those which are usually attacked. The discharge of blood generally appears a day or two prior to the menstrual period, and continues as long or longer than it. Sometimes it slightly co-exists with the menses, when the latter are then but a sanguinolent serum. The suppression of the vicarious discharge must be conducted very cautiously; and, when in a young person the health does not suffer, we must seek to do this only by means calculated to restore the natural menstruation. A mere expectant treatment would, however, not be right if a large flow of blood proceeds from the lungs or stomach. In our endeavors to establish menstruation, bleeding in the foot will often be useful, or, if general plethora be present, from the arm. Leeches to the vulva are very useful. M. Jamin recommends that depletion should only be employed some days after the cessation of the periodical hæmorrhage, in order to avoid any risk of sudden suppression.

MENORRHAGIA.

Women living in towns are most liable to this affection. Its danger must not be estimated so much by the quantity of blood lost, as by the comparison of this with the power possessed by the woman.

It is often seen in the newly-married, and especially when intercourse occurs near the menstrual period. It exposes women to abortion, and may lead to organic disease of the uterus.

The various uterine affections occur especially at certain periods of life. Thus, at (1.) the epoch of puberty, we find amenorrhœa and chlorosis, which may precede the flow, and these may be followed by dysmenorrhœa or vicarious hæmorrhage, and menorrhagia is then uncommon. In the second, the uterine period, suppression is frequent, but dysmenorrhœa is rarer, especially among the married, as are also chlorosis and vicarious hæmorrhage; but menorrhagia and metrorrhagia are commoner. In the third, or critical period, menorrhagia and metrorrhagia are frequent, vicarious hæmorrhage occasional, and chlorosis very rare.

INFLUENCE OF MENSTRUATION UPON DISEASES.

This is sometimes beneficial, but the menses appearing at the commencement of the disease have occasionally aggravated it; while immediate relief has often followed their appearance as a disease arrived at its height. In chronic disease, especially of the brain, the appearance of menstruation has likewise seemed frequently beneficial, although it is difficult always to say, whether it is the cause or consequence of the removal of the complaint.—The beneficial influence of the first menstruation in removing many of the ailments of young girls, and procuring a robust health, is well known. Many affections, such as glandular disease, swellings of the joints, hæmorrhages, incontinence of urine, obstinate cutaneous disease, and especially various nervous diseases, &c. then disappear. On the other hand, it is sometimes associated with the development of grave disease, especially hereditary, as phthisis, syphilis, &c. In this case it is but the occasional cause of the manifestation of a latent predisposition.

The influence of the cessation of menstruation upon disease is indeed important, and may manifest itself in various modes.

1. Local Maladies.—Hæmorrhages and the various forms of leucorrhœa are very common, either as resulting from the presence of organic disease, or from a mere congested state of the uterus. Discharges have existed in some cases from 3 to 9 years, and yet have been unattended by organic disease. Cancer and other formidable affections are however but too common, and the author attributes the production of these, in many cases, to too early marriages, and to the too frequent, and too nearly the menstrual epoch, employment of sexual intercourse.

2. General Diseases.—Plethora manifests in various manners upon the different organs, and thus the neuroses, cutaneous diseases, hæmorrhoids, obstinate constipation, dysuria, &c. are produced.

3. Influence on existing Diseases.—The influence of the cessation in developing any existing germ of disease is well known, and there is scarcely a malady which may not become exasperated at this period; yet, as Fothergill observed long ago, some women, who have long suffered from debilitating discharges, seem at this period to acquire a renewed vigor of constitution, and from having been very thin become fat.

4. Proportionate Mortality from Uterine Disease at this period.—Of 721 women there were 373 who had had children, and 81 who had miscarried; of these about a third part had some functional or structural affection of the womb. Many of the women were unmarried—a class of persons peculiarly obnoxious to puerperal disease. It is certain then than after delivery the womb is liable to various affections, and the critical period of life seems also to arouse these. Of 60 women suffering from uterine lesions, in 35 these came on during the uterine or active period of life; a great majority of these lesions were of an inflammatory nature, and only four cancerous. Women are not aware of the liability of the uterus to become affected after delivery; for nearly six weeks it remained encreased in size and engorged, so that, errors in regimen, too early exercise, or too early sexual intercourse, may develop much mischief. Of 25 cases occurring at or after the critical period, 14 were cancerous, and 9 engorgements with discharges. In 6825 women Madame Boivin observed 409 cancerous affections of the uterus, 203 of the ovary, and 56 of the breast, in all 707. Dionis declares that in 15 out of 20 women the affection only appears at this age. The greater number of women in 57 cases of polypi observed by Dupuytren were aged from 40 to 50.

It is very important to remember that 9 out of 25 of the uterine lesions were mere engorgements; and even affections feared to be mortal have been sometimes cured after a protracted struggle. The author says that women among the higher ranks, and especially the English at Paris, indiscriminately regard all ulcers as fatal, and thus allow honorable but dangerous scruples to prevent their seeking advice.

INFLUENCE OF DISEASES UPON MENSTRUATION.

1. Acute.—There is scarcely an acute affection that does not derange menstruation, rendering it irregular and usually suppressing it. This is especially the case with inflammatory affections of the abdomen. As a general rule no special treatment must be adopted deriving the existence of the disease, although, occasionally, a speedy cure has resulted, by deriving the blood towards the genital organs. This, when desirable, is best brought about by depletion from the foot or arm or the use of an emetic; baths, leeches, cupping-glasses, and a ligature, are desirable under various circumstances. 2. Chronic.—Here too, the usual affection is suppression; and so frequently does this occur in cases of phthisis, that the author thinks it may form one point of diagnosis between this disease and chronic bronchitis. Affections of the heart in their latter stages, of the alimentary canal, and of the liver, often cause suppression, and many lesions of the uterus only manifest themselves by changes in the function of menstruation. Affections of the nervous system, as hysteria and epilepsy, have a notorious effect upon the menstrual function. In insanity varieties in menstruation are very frequent, and, while in a few cases these precede, in the great majority they follow, the loss of reason. In 101 girls affected with distortion of the spine, M. Bouvier found 32 first commenced menstruating while under treatment, in 24 the menses continued regularly, and in 40 they were suppressed, but without serious symptom.—When surgical operations are performed near the menstrual epoch, the menses are frequently anticipated, but when at a distance from this, they are often delayed. Occasionally after operations the wounds discharge blood periodically, and should not then be officiously meddled with.

FROM THE LONDON MEDICAL GAZETTE.

Observations on the Statistics of Phthisis, and on the Influence of Climate and Occupation in the Production and Development of that Disease.

Notwithstanding the vast labor which has been expended in the investigation of phthisis, and the great talent which has been devoted to the task, it must be confessed that, although the diagnosis is greatly improved, and, indeed, may be said to be almost perfect, and thus the first step to a more accurate knowledge of the patholigical nature of the disease made, yet no method of cure, nor even any means of prevention, have been discovered; and although nature has undoubtedly, in some few cases, of itself effected a cure, this disease has never hitherto yielded to human remedies, and still remains the true 'opprobrium medicorum.'

In this state of the question it may certainly be worth while to examine those circumstances by which it would seem the frequency of phthisis is affected; and though I do not venture to hope that in the present series of papers I can contribute much towards the settlement of this confessedly difficult subject, I hope this essay may be the means of directing to this subject the attention of some members of the medical profession more competent to the task than myself; certain as I am that this method of investigating disease, and more especially phthisis, may lead to results of no inconsiderable value and importance.

In the annexed table are given the total number of deaths registered in different years, exclusive of violent deaths, and those the causes of which were not specified, and the number of deaths caused by phthisis in the same years, distinguishing the sexes. The year 1837 includes only the last six months of that year; and in the Registrar-General's report for that year, the deaths are recorded under the two separate heads of consumption and decline—a distinction which is not made in the subsequent reports, and which, therefore, I have not retained.

Year.	*Total number of deaths.*			*Deaths by phthisis.*		
	Males.	Females.	Total.	Males.	Females.	Total.
1837,	67,949	68,726	136,675	12,963	14,786	27,751
1838,	159,969	158,535	318,504	27,935	31,090	59,025
1839,	159,733	158,784	318,517	28,106	31,453	59,559

From the above table I have calculated the proportion which the number of deaths caused by phthisis bears to the total number of deaths of males and females, and below are given the results, or the number of deaths caused by phthisis in each 100 deaths happening in England and Wales in both sexes, and also the proportion which the aggregate number of deaths by this disease bears to the total number of deaths including both sexes.

Year.	Males.	Females.	Both Sexes.
1827.	19·03	21·5	20·22
1838.	17·4	20·9	19·15
1839.	17·5	19·2	18·65
Mean. . .	17·99	20·73	19·36

The comparative tendency to phthisis in the two sexes has been calculated by Mr. Farr by taking the ratio which the number of deaths from phthisis in 100 deaths of males, and in the same number of deaths of females, bear to each other. Estimated in this manner, the mean per centage of deaths by phthisis of males and females being 17·99 and 20·7 in the two years and a half, would give the number 1·14, as expressing the tendency to consumption in the female: the tendency in the male being taken as unity.—The above, however, is not a very exact method of exhibiting the comparative tendency to phthisis in the two sexes. A more accurate estimate is, in my opinion, obtained by comparing the actual mortality from phthisis in the two sexes, with the number of persons of each sex living at the time. Estimated in this manner, the results are rather different from those of Mr. Farr, and lead to the conclusion that the difference in the mortality from phthisis in the two sexes is not so great as stated by him, and as is generally supposed.

The population of England and Wales in 1831 and 1841 respectively is given below, and indicates an annual rate of increase in the whole population of 14·525 per cent. in the ten years, or, assuming the population in 1831 as unity, an annual rate of increase of ·014525: taking, in the same manner, the male population in 1831 as the unit, the table shows a rate of increase =·01483 of the males; while, in the same way, the annual rate of increase of the female population, in the ten years ending 1841, was ·01422.—These rates of increase are much below those which took place in the ten years ending 1841. We have supposed the rate of increase uniform, or an equal number added to the population in each year. There can be no doubt that this supposition is incorrect, and that the rate of increase has been gradually diminishing; yet, nevertheless, a tolerably exact estimate of the population is thus obtained, and a result sufficiently near the truth is, for our purpose, perhaps, obtained.

The population returns in 1831 and 1841 give the entire population as follows:—

	Males.	Females.	Total.
1831	6,769,469	7,125,105	13,894,574
1841	7,773,411	8,138,314	15,911,725

Calculating the population in the intermediate years in the manner just explained, we shall find the population, at the periods to which the Registrar-General's reports extend, to be as under:—

	Total.	Males.	Females.
1837	15,105,482	7,372,470	7,720,105
1839	15,307,300	7,472,970	7,821,423
1838	15,509,118	7,573,470	7,922,741

Taking the above numbers to represent the actual population at the respective periods, the annual mortality from phthisis in each 100 males living in England and Wales,

was in 1837.	·351796
1838.	·373814
1839.	·377440
Mean.	=367683

The mortality from phthisis in the female sex is higher, and in the same years this disease caused a mortality in each 100 females living,

of.	·383052	in 1837
. . . .	·397498	1838
. . . .	·396996	1839
Mean.	=392515	

The comparative mortality from phthisis in the two sexes thus appears to be, taking the mortality in the male sex as unity, in the ratio 1·0675 to 1; or, in other words, consumption is in this country rather under seven per cent. more fatal to females than to males.

Viewed in this manner, the difference in the fatality of phthisis to the two sexes is, as we have before remarked, much below what has been generally supposed.

That certain small spots or districts of country are remarkable either for the frequency of phthisis among the inhabitants, or their freedom from that disease, is a fact which we ourselves have noted. Mr. Thackrah, in his very interesting work,* has thus remarked the great frequency of this disease in the neighborhood of Bradford. But, with respect to this particular locality, Mr. Thackrah makes an additional and very curious observation, which I think it is worth while to stop to notice. In speaking of the well-known forges in the neighborhood of that town, and the health of the workmen employed at them, he remarks that, 'Notwithstanding the great transition to which founders are exposed, we did not find that they are particularly subject to acute diseases. We were informed that they are rarely off work, except from intemperance. Consumption is said to be exceedingly rare in the neighborhood of the iron-works.' The statement made in the last part of this extract appears to be confirmed by another observer; for the writer, in a note, adds, 'Dr. Macturck, of Bradford, who, from his vicinity to the iron works, is well acquainted with the subject, has been kind enough to review these observations. He states them to be correct. He thinks that consumption, though the peculiar scourge of Bradford and its neighborhood, is comparatively rare among iron-founders.'

We have not, however, (more particularly as Mr. Thackrah has furnished no numerical data) from this single fact, concluded that this metal exerts a protective power against phthisis, and the above observations must not, therefore, be understood to be urged as any proof that this metal has power, when absorbed into the human system, of warding off the incursions of this perhaps the most formidable and fatal disease to which the human species is exposed. I consider the peculiar freedom of the workmen at the Low Moor works from phthisis, while they are exposed in a remarkable degree to the influence of arsenic, only as a fact singular in itself, and which deserves to be contrasted with the supposed effects of arsenic in other places and under different circumstances; and I hope that the present notice of this fact may lead some of the readers of this journal who, by residing in the neighborhood of copper smelting works in Wales, or near iron bloomeries, have the opportunity of investigating this subject, to turn their attention to the point.

---

* The Effects of the principal Arts, Trades, and Professions, on Health and Longevity, &c., p. 77.

The miners in some parts of Germany, particularly those employed in the preparation of smalt, and the copper smelters in Wales, are much more exposed to the fumes of arsenic; but I have not been able to learn, as far as concerns the latter class, whether, as among the iron-founders at Bradford, any peculiar exemption from phthisis obtains. Ramazzini, however, distinctly asserts, that the fumes of arsenic are not only highly injurious to the workmen employed in the cobalt mines of Germany, but also that the absorption of this metal frequently induces consumption. He observes that care is taken to prevent the fumes escaping, the arsenic being condensed or sublimed in the process of roasting in long wooden pipes:—'wobei aber niemals verhindert kann, dass nicht ein Theil der Rattenpulverdämpfe in die Lungen der Arbeiter, besonders derer, die das Feuer behandeln, gelangen sallte, welche auch nach Henkel's Zeugniss fast insgesammt von Engbrüstigkeit, Keichen und Husten befallen werden, welche Zufälle oft zehn bis zwanzig Jahr lang, bis an ihrem Tod dauern, das Leben allemahl, aber unstreitig, wegen der Arbeit im Freyen, nicht so mächtig als die Grubensarbeit verkurzen, und endlich insgemein, nach einem mühselingem Lebee, die Lungensucht, ein auszehrender Fieber und der Tod verursachen.' At the time when the preceding extract was written, the diagnosis of phthisis was very imperfect; and we surely think, from the above account, that the characters of the disease are those of true tubercular phthisis.

In conclusion, I fully coincide in, and feel the force of, the observations on the discovery and selection of remedies for this disease, inserted in the English translation of Louis on Phthisis. 'The difficulty of the inquiry is immense, and much caution must be shown in arriving at general conclusions: on the other hand, the hopelessness of the disease, and the insufficiency of every known treatment, fully justify experiments in search of a new remedy.' Undoubtedly, when we consider the fearful mortality from phthisis, and the age at which it most commonly attacks its victims, experiments appear to be justifiable; and a successful mode of treating this disease to be the great and most important advance yet remaining to be made in the art of medicine. 'Et profecto, si hominibus unquam liceret gloriari, certe de hoc maxime gloriandum esset, tantum scilicet profecisse genus suum, et tam præclarum tamque perenne existere ingenii humani monumentum.'

BIOGRAPHICAL NOTICE OF RICHERAND;

HIS DISPUTES WITH DUPUYTREN, ETC.

Richerand was born in 1779, and, while yet a young man, went to Paris with the view of establishing himself there as a surgeon. Gifted by nature with quick vivacious talents, he early distinguished himself as a ready and graceful writer. In the 22d year of his age he published his well-known Elements of Physiology—a work which has passed through very numerous editions, and has been translated into almost every European language. It will long remain a favorite with the medical student, from the beauty of its style and the liveliness of its descriptions; indeed, there is perhaps no professional book which has been so extensively known to general readers as this model of elementary works.

Every celebrated man has, it is said, his peculiar fatality; that of Richerand was to find in his youth such a rival as Bichat, and in his manhood a competitor like Dupuytren. He was surpassed by both, but without being effaced. The sun of Bichat, which rose with such brilliancy of promise, soon set; and Richerand then reigned nearly alone in the path which he had opened up to himself. He had dedicated his work to Fourcroy, who at that time occupied a high post in public instruction, and he was not long in receiving the reward of his well-selected homage. He was appointed surgeon first to St. Louis Hospital, and afterwards to the Guard of Paris; and in 1807 he obtained the chair of surgical pathology in the Ecole de Paris.

He devoted himself with great energy to the labors of his profession, and at length acquired a high reputation as a bold operator. This was greatly increased after the occurrence of the memorable case of cancer of the breast, in the removal of which he cut away portions of several of the ribs. The case was altogether a very extraordinary one. The patient was a surgeon himself, and the disease had made so much progress that the subjacent ribs had become affected. Encouraged by the able counsels of his fellow-professor Dupuytren, M. Richerand undertook the formidable operation of excising the whole of the morbid mass. 'By a quadrilateral opening which formed a sort of window in front of the heart,' this organ was quite exposed, and was seen and touched by several persons.—(Histoire d'une resection des Côtes et de la Pleure, lue à l'Academie Royale des Sciences, 27 Avril, 1818.) Although the patient died subsequently from the return of the disease, this 'belle operation' was not the less creditable to the skill and daring of him who performed it; and his fame was widely diffused in consequence. But unfortunately for him, he was not able to maintain the high position to which he had now been raised in the eyes of the public. He did not combine the calm penetrating glance of the philosophical surgeon with the boldness and sang-froid of the skilful operator. 'No one,' said his lively compatriot Brillat Savarin, 'could comfort better, or had a gentler hand, or a more rapid use of the knife:'—true; but such qualities, although they indicate talent, can lay no claim to genius. Now, this was the case with Richerand. And then beside him, and almost always under his very eyes, there was rising up a rival who knew how to combine mental powers, that were unquestionably superior to those of Richerand, with an insatiable ambition, and with a daringness, a self-confidence, and at the same time a pliability of character that had rarely been equalled.

This man had moreover a great advantage over his rival,—a masterly talent of speech. Richerand, although a graceful and eloquent writer, could never express himself in public well. He seemed to be confused in his thoughts, and his language was abrupt and inelegant. He had none of that *flumen orationis*, that smooth strain of animated words which captivates an audience and gives confidence to the speaker. His accent and pronunciation were moreover bad, and his gestures utterly graceless.

All this was much against his success as a professor, and the very consciousness of his defects, which were rendered still more conspicuous by the foil of Dupuytren's admirable talents as a public speaker, seemed to annoy him exceedingly, and was probably the main reason of his deep-sown envy against his celebrated colleague.

The publication of the Nosographie Chirurgicale added greatly to his reputation, and deservedly so; but, like all his former writings, it was chiefly conspicuous for the beauty of its style, and a certain felicitous explanation of whatever subject was treated of. In the course of a few years, however, its success, began to wane before the increasing brilliancy of Dupuytren's lectures—lectures which, it is well known, attracted students from every part, not only of France but of Europe, to listen to the words of the Napoleon of surgery. Richerand's class-room on the other hand was never well attended. Desgenettes, ever ready to launch a biting jest when an occasion offered, replied to a gentleman—who asked, 'what is Richerand doing? is he writing?'—No, our colleague 'professe un cours public que le public evite.'

When the Academy of Medicine was instituted, Richerand, whose elegance of style was well known, was appointed secretary of the surgical section. Impelled by the desire to rule, a feeling which almost always attends men of some talent, he wished to have an ascendency in the meetings, and to imitate the example of Louis, the illustrious secretary of the old Academy of Surgery. But here again he failed in his object. The frequent opposition which he encountered, and the satirical allusions to the new demi-Louis, soon taught him that his pretensions could not be maintained; and accordingly he resigned his situation. The presence of his rival too was a source of continual vexation; feeling, as he must have done, how he was overshadowed by the superior talents of Dupuytren, whose disdainful hauteur, and cold contemptuous manner were always blended with an air of affected moderation. The virulent attacks and bitter personal recriminations, in which both too frequently indulged at the meetings of the Academy, are still remembered with regret. On one occasion, a member of the learned assembly exclaimed with most malicious point, 'These gentlemen tell *such truths* of each other, that those who hear them take them for calumnies.' The quarrel ceased, but not the mutual hatred which had given rise to it. Richerand, in a public report communicated to the Academy, and which he subsequently published in an extended form, under the title of the 'Recent progress of Surgery,' attacked his enemy under the guise of Simon Pimpernelle, who is described in an old work as Parisiensis, vir disertissimus, consultor famosus, societatis barbitonsorum chirurgorum quater præfectus; and on a subsequent occasion he designated him as 'a man with a heart of ice, and a brain circled with bronze, who lies as other people breathe.'

It is a curious circumstance that Richerand was, after the death of his great rival, charged with the article 'Dupuytren' for the Biographie Universelle. Although a reconciliation had taken place during the last illness of the latter, and though the writer seemed to have felt the justice of the saying, nil nisi bonum de mortius, he was not able to conceal the old spirit of animosity which had so long existed between them: manet altâ mente repostum. After bestowing a few eulogies, as pale as insignificant, he sums up the character of Dupuytren by telling us that his genius 'ne consista qu' à faire autrement.'

The article was ill-received by the public, and gave rise to the witty remark of Dr. L., 'Zoilus genuit Mævium, Mævius autem genuit Richerandum.'*

He afterwards, we are told, commenced a history of surgery; and it is to be regretted that he did not carry out his design to completion. Instead of this, he entered the arena of political partizanship, and published, in 1837, a work entitled, 'Of Population in its relations with the nature of Governments.' It was a hasty production, and had but little success: in truth it was not much more than a vehement invective against the nineteenth century. His views seem to be those of ultra-toryism. He is friendly to an almost absolute despotism, and regards liberty and equality as sublime political *niaiseries*. Montesquieu, according to him, is only a cautious Gascon; and O'Connell is a revolutionary Thersites. In politics, as in surgery, he invokes the use of fire and steel for the cure of social as of corporeal disorders. A devoted admirer of the silence and order which prevailed under the rule of Napoleon, he seems to have entirely overlooked the disastrous close of the mighty emperor's life. He disliked every novelty, and the social movement, that is going on in the present day, was viewed by him only as the baneful work of disorganization. He was ever afraid, like the Abbé Sieyes, of seeing 'l'enfer' of the republic reinstated in power.

Although of a strong and vigorous constitution, Richerand did not live to be an old man. The serene influence of easy circumstances, and of a life apparently calm and fortunate, did not contribute to lengthen his days. He died after a short illness in January, 1840. He had expressed his desire that no *eloge* should be pronounced over his tomb; well aware, no doubt, of what little value such posthumous glorifications are in the present age of scepticism and indifference.

It is useful to every one to muse occasionally on the characters of the leading men in our profession; especially after they have been withdrawn from our eyes, and when all partiality and prejudice have ceased to influence our judgments. The lives of such men as Dupuytren and Richerand may suggest many a useful hint to the medical practitioner. Both were gifted with great talents; but both alas! were destitute of that well-adjusted poise of mind, and that guidance of the higher moral feelings, without which, although intellectual and professional eminence may be attained, the real prosperity of personal happiness and of cotemporary respect is not to be won.

Let it be ever borne in mind that no person can continue to give way to the impulse of any one extreme and energetic feeling, without compromising his own comfort and welfare. Dupuytren and Richerand suffered most bitterly from this fatal mistake. And what has been the result?—not only were they unhappy in themselves, but they also failed in doing for science what science had a right to expect from them. Both of them died in the strength of their age, worn out less by the decay of their bodily powers, than by the corrosion of mental anxiety and disappointment. In the latter years of Dupuytren's life, notwithstanding his ever-increasing celebrity and worldly success, the care-worn expression of his features, and the cold mechanical smile that often played upon his lips, indicated too clearly the inward distress and deep-rooted melancholy which was preying upon his soul. The germ of death was already sown. His reputation with posterity will not be at all commensurate with the great fame which he had in his day. Richerand, on the other hand, vexed at the acknowledged superiority of his rival, wasted his talents in angry contentions, and at length gradually retired from the field in which, had he been satisfied with the second command, he might have won most honorable laurels. The manhood of his professional career by no means fulfilled the bright promise of his early days; not that his capacities and attainments had at any time been over-estimated, but simply because they were not directed in a right course, nor matured under the fostering influence of a peaceful and contented spirit.—*Gazette Medicale.*

---

* As a specimen of the article we may quote the following passage:—'An eloquent, ready, and ingenious professor, gifted with an indefatigable activity. To have his name repeated with the epithets of the great, the eminent, the first surgeon of the Hôtel Dieu, seemed to be the main object, as it was the chief delight, of his life. It consoled him for his domestic misfortunes, the publicity of which was not without its charms to him. [Dupuytren, we believe, was unfortunate in his matrimonial alliance; his wife eloped with a foreigner.—*Med. Chir. Rev.*]

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, July 16, 1842.

Medical Education.

The most satisfactory proof imaginable of the miserably inefficient system of education adopted by the Faculty of the Stuyvesant Institute Medical School, is afforded by the fact that *all* the candidates for admission into the Naval Medical Corps, from that establishment, were *rejected* by the Board of Examiners at their late session. Two gentlemen, who studied at the old and respectable College of Physicians and Surgeons, passed their examinations before the Board, with great eclat.

Medical Fees at Coroner's Inquests.

We have been favored with a copy of the following letter, addressed to the Coroner of Kings County, N. Y.:—

SIR:—At the Anniversary Meeting of the Medical Society of the County of Kings, it was, on motion,

Resolved, That inasmuch as the Supervisors will not allow more than five dollars to any physician for an autopsic examination, Therefore, we will not attend any Coroner's Inquest professionally, unless the sum of twenty-five dollars be allowed as a fee for each autopsic examination.

Resolved, That a copy of this resolution be sent to the Board of Supervisors, and to the Coroner of the County.

(Signed) BRADLEY PARKER, Secretary.

To ANDREW OATES, Esq.,
Coroner of the County of Kings.

We regard this movement as eminently worthy of approbation, and we hope that the example thus presented by our brethren of the County of Kings will be extensively followed. The fee at present allowed for making a *post mortem* examination is altogether inadequate, and it is not to be wondered at that in such circumstances this part of the investigation before a Coroner's Jury is so often either omitted, or performed in the most slovenly and inefficient manner. We repeat the expression of our hope that other Medical Societies will take similar steps to those of which we have gladly taken the present favorable notice, and that the desired result may speedily be obtained.

THE MEDICO-CHIRURGICAL REPORTER.

Poisoning of Leeches by the Blood of the Sick.

BY STEFANO GRANOANI.

In the beginning of May, there was brought to the Brescia Hospital for males, a butcher, who had contracted malignant carbuncle in cutting up an ox that had died of that disease. Among the means employed were one hundred and twenty leeches, which were to be applied in three divisions to his right arm, all of which died on being taken off the skin of the patient. Our chemist being informed of the case, though he did not doubt that the death of the leeches proceeded from the blood which they had sucked and were full of, had several other lively and fresh leeches applied, and these also immediately fell off dead. This having occurred in the calamitous time of the cholera, curiosity was excited to know whether leeches would also die from the effects of the blood sucked from cholera patients; and it was found, on good information, that this had actually occurred in the cholera hospital.—*Pharm. Jour. and Transactions.*

Cases of Milky Urine.

Case 1.—A young creole of the Isle of France had been subject in his youth to hæmaturia, which had continued till he was fourteen years of age. His health, however, remained good, and did not seem to be affected until his seventeenth year, when he was attacked with sharp pains in the loins, which, after lasting a few days, were followed by a discharge of urine of a milky appearance. This state of the secretion had continued for about two months, when the patient first consulted me. He was thin and weak, but did not complain of pain anywhere. His appetite was tolerably good; but his digestion seemed to be feeble; and he had always more or less thirst upon him.—The bowels were relaxed several times in the course of the day, and after the least exercise the skin perspired copiously.

The urine, which was less in quantity than the drink taken, exhibited on cooling a whitish coagulated mass like the curd of milk, and gave out a peculiar faint smell. From this clot, when squeezed, there flowed out a whitish serosity, which upon analysis afforded a considerable quantity of fibrine. The action of boiling water and of sulphuric acid showed the predominance of albumen: the quantity of gelatine was much less. The urine contained scarcely any acid, and only a very small proportion of its ordinary salts.

M. Chapotin recommended a nutritious animal diet and the internal use of steel and bitters, with the application of stimulant liniments to the loins and abdomen. Under this treatment, the patient's general health improved very sensibly; but the state of the urine remained as before. The tincture of cantharides was then given internally; in the course of ten days the dose was increased from six to twenty drops. The beneficial effect of the remedy was soon apparent: first the fibrine, and then the albumen and gelatine disappeared, and the urine gradually acquired a yellowish hue in proportion as these elements diminished and that of the urea increased: its odor, however, remained still faint and unpleasant. In the course of another week or two the secretion appeared to be perfectly normal, and continued so for nearly two years under the use of a tonic diet, the use of cold bathing, and residence in the country. He had then an attack of nephritic colic, in consequence of some imprudencies, and again the urine became of a whitish hue; but this appearance quickly vanished under the use of very simple means.

Dr. C. mentions that he has cured three other cases with the same remedies which he employed in the preceding one.

Case 2.—A gentleman, native of the Isle of France, 21 years of age, had been affected with hæmaturia in his childhood; in his 14th year he suffered from occasional nephritic pains, but did not void any gravelly matter at the time. In 1833, after lifting a heavy weight, he passed a great quantity of blood by the urethra. In 1835 he left the Isle of France for Paris. While there, the urine was occasionally thick and sanguineous, with a whitish color on the surface: these symptoms were always increased by any bodily fatigue, and were usually accompanied with pain in the loins. In 1836 he consulted M. Rayer. His urine, when allowed to rest in a closed phial for some hours, was found to exhibit a white layer on the surface. On the following day, the same specimen had separated itself into two distinct nearly equal portions, of which the upper was opaque, of a yellowish-white hue, and without any sensible odor, and the lower was red and opaque, and had deposited two coagula—one of which was reddish-brown, like a clot of blood, and the other was white. The upper portion was found by chemical tests to contain a fatty matter of a beautiful yellow color, and which left a strong oily mark on paper. (The details of the analytic examination are given at considerable length by our author, to whose work we must refer those who wish to know all the particulars.)

The patient was ordered to be bled, and keep himself very quiet. The effect of the bleeding, we are told, was very decided; for the urine was found on the following day to be transparent and yellow as in health, with acid properties and of a urinous odor: its specific gravity, however, was very low, being only 1·0121. The report of the case closes thus: 'complete disappearance of the symptoms. A few weeks afterwards, the urine became again sanguinolent and albumino-fatty, in consequence of fatigue; but two or three days' rest served to restore it to a healthy condition.'—*Med. Chir. Rev.*

New Preparations of Iron.

Citrate of iron.—The citrate of iron appears to have been first introduced to the notice of the medical profession by M. Béral, of Paris. The process given by this pharmacien for the preparation of the salt, and which was published in 1831, is as follows:—

Take of crystallized citric acid four ounces. Distilled water four ounces. Moist hydrated peroxide of iron about eight ounces. Weigh the acid and water in a platinum capsule, and apply heat; when the acid is dissolved, and the solution boiling, saturate it with the oxide of iron, adding rather more of the oxide than the acid will dissolve. When cold, filter the solution, and make the quantity sixteen ounces. This solution, spread out on glass, will speedily dry, and separate itself from the glass in thin limillæ.

The hydrated peroxide of iron may be prepared either from the sulphate or from the sesquioxide of iron. A formula for its preparation from the sulphate is given in the Edinburgh Pharmacopœia. It is prepared from the sesquioxide, by dissolving this oxide in hydrochloric acid, and precipitating with ammonia.

The oxide of iron and citric acid combine in the proportions of forty parts of the oxide to seventy of the crystallized acid. In using the moist hydrated oxide, as the degree of moisture will be subject to variation, the oxide should be added in excess.

The salt thus formed is uncrystallizable; it strongly reddens litmus paper, and has an acid, not unpleasant, taste. It is very slowly soluble in cold water; so much so, indeed, as to have led to the supposition of its being insoluble. It dissolves readily in boiling water.

Ammonio-citrate of iron.—If to the acid citrate of iron in solution, prepared according to the foregoing process, ammonia be added, so as to neutralize the excess of acid, a double salt is obtained, which dissolves in cold water much more readily than the citrate, and which, from its neutrality, may in some cases be preferable to the other.

This neutral salt is frequently sold under the name of citrate of iron, and having been extensively introduced to the notice of medical men, under this appellation, without its real constitution being explained, it is the salt generally referred to, where citrate of iron is ordered in prescriptions. Much inconvenience frequently arises from this circumstance, the dispenser being at a loss to know whether he should use the salt which the term citrate of iron most correctly represents, namely, the acid citrate, or that which is more frequently intended by the prescriber, namely, the ammonio-citrate; the latter being imperfectly and improperly described by the term citrate of iron. It is very desirable that such a nomenclature should be adopted, in the case of these two salts, as would obviate this confusion; and it is hoped that the publication of the formulæ for both preparations may tend to effect this object.

Lactate of iron.—The preparation of this salt is effected, according to M. Louradour, by the direct action of a dilute solution of lactate acid on iron filings.

The lactic acid is obtained by the spontaneous fermentation of milk. To eight pints of milk add eight ounces of sugar of milk dissolved in water; leave this mixture, in an open vessel, exposed to the air for several days at a temperature of between 70° and 80°. The liquid being now found very acid, is to be neutralized with bicarbonate of soda; on further exposure this will become again acid, and must be neutralized by the addition of more of the alkali, and the same process repeated until the whole of the sugar and milk has been converted into lactic acid. The liquid is now to be boiled to coagulate the caseum, and the filtered solution carefully evaporated to a syrupy consistence. The product of the evaporation is taken up by alcohol, which dissolves the lactate of soda. Sulphuric acid, added in proper quantity to the alcoholic solusion, forms sulphate of soda, which is precipitated, while the lactic acid is retained in solution, nearly pure. It may now be obtained by evaporation of the alcohol.

In a weak solution of this acid in water, iron filings are to be digested at a gentle heat for six or seven hours; after this, boil the liquid, filter, and concentrate the solution, until crystals of the salt are afforded on cooling. These crystals are to be put into a funnel, washed with alcohol by displacement, and dried quickly.

This salt, which is a lactate of the protoxide of iron, is generally met with in the form of a yellowish or greenish white powder. It is but little soluble in water; it reddens litmus paper, and has a ferruginous taste. When dissolved in water, the iron passes to a higher state of oxidation, and the salt becomes yellow.—*Pharm. Jour.*

Medicinal Properties of Solanum Tuberosum.

From the leaves gathered at the proper period, and subjected to careful preparation, the extract, which I have the honor of offering to your notice, is procured, possessing narcotic powers of a very high degree.

In the sixth volume of the Transactions of the College of Physicians, is a paper, by Dr. Latham, on the Medicinal Properties of Solanum Tuberosum: it was read in the year 1818, since which time I have every reason to believe the extract has entirely fallen into disuse. Dr. Latham states that 'an accident which he witnessed, occurring to an animal, ought to have induced him sooner to have made a trial of its narcotic powers upon the human body, and the effects produced in the following cases will, perhaps, entitle it to a rank of no mean estimation in the catalogue of medicines.' The doctor then furnishes us with the detail of seven cases, in most of which the powers of the extract were particularly marked.

As a medicine the extractum solani tuberosi will rank between belladonna and conium: it has a decided tendency to produce relaxation of the bowels, and, therefore, will, it many instances, supply the place of opium. In a large dose it produces all the effects of narcotic poisons—headache, vertigo, stupor, &c.; but in moderate ones it seems to me to possess powers far more certain than either hyoscyamus or conium: it is particularly serviceable in chronic rheumatism, painful affections of the stomach and uterus.

Should experience confirm the virtues which I believe reside in this preparation, a great advantage will accrue from the large and certain supply always to be obtained: this is not the case with the other narcotic plants, hyoscyamus and conium, which, in some seasons, can with difficulty be obtained in sufficient quantities. The samples of extract and preserved juice upon the table, were kindly prepared for me by a member of your Society, Mr. Edwards, of Great Russell street; they will be found, upon inspection, to possess not only the odor, but the taste, of the class of plants to which the solanum tuberosum belongs. I am aware that much time is required to ascertain the merits of any new medicine, and that nothing but the most careful and repeated observation can entitle it to rank among the articles of the materia medica; yet, from the trials I have made with the solanum tuberosum, I am induced to place considerable reliance on its powers, and have, therefore, much pleasure in offering it to the notice of this Society.

The dose of the extract is from one to three grains, three times a day.—*Mr. Dyer, in Pharmaceutical Journal.*

On the Medicinal Properties of Fish-liver Oil.

The fish, from the livers of which the oil that has at different times been much recommended in a variety of diseases is obtained, are the cod and one or two species of the ray—*oleum jecoris aselli vel rajæ.* We learn from M. Tiedemann, a merchant of Bremen, who has long dealt in the article, that there are four kinds of cod-oil in commerce. The livers are packed in a cask, end upwards, and exposed for a length of time to the heat of the sun. When the upper layers are removed, the clearest oil is obtained; this is found to become stronger and darker towards the lower part of the cask. The darkest and thickest is used in the manufacture of chamois leather. MM. Gouzée and Gmelin state in their memoir (Bulletin Med. Belge, Janvier 1833), that the clearest oil should be used for internal administration; but MM. Trousseau and Pidoux, in their treatise on Materia Medica, recommend not only the second degree, which has a fishy taste and causes an acrid sensation in the back of the throat when swallowed, but also the third degree, obtained by boiling the residue, and which is of a brown color, has a most disagreeable empyreumatic smell, and is still more acrid. The opinion of these gentlemen has been confirmed by the experience of most physicians in Germany and Belgium—that the thick acrid oil is much more efficacious than that which is transparent and milder.

Within the last five years, chemical analysis has detected the presence of a small proportion of iodine in fish-liver oil; but it is very doubtful that its medicinal virtues depend upon this principle. However this may be, it is certainly true that the browner the oil is, the more iodine is usually present in it.

That fish oil has been long known as a remedial agent, is proved by the narrative in the Apocryphal book of the Bible of Tobias and the Angel: Tobias is ordered to take the heart, liver, and gall of the fish that he has caught on the banks of the Tigris, and use them in a prescribed manner. Pliny too, in his Natural History, expressly states: 'lichenes et lepras tollit adeps vituli marini, murœnarum cinis cum mellis obolis ternis, jecur pastinacæ (raiæ) in oleo deoctum. Quidam delphini jecur in fictili torrent, donec pinguetudo similis oleo fluat, ac perungunt.' The inhabitants in many parts of England, Holland, and Germany have been from time immemorial in the habit of employing cod-liver oil in the treatment of chronic rheumatism, rachitis, &c.; but it was not until Michaelis about the middle of last century, and subsequently Dr. Percival (1790) and Dr. Darbey (London Medical Gazette, vol. 3, p. 392), drew the public attention to its effects, that it has been at all generally known to medical men. There are numerous reports of its efficacy in the German Journals, references to all of which are given by Dr. Delcour in the number of the Archives de la Med. Belge, for last June.

The physiological effect of fish-liver oil appears to be that of a general stimulant of the whole body. It is apt to produce nausea and even vomiting at first; but after a short time it ceases to do so, and often the appetite very sensibly improves under its use. The urinary secretion is generally increased in quantity, and often a copious deposit of lateritious sediment takes place. The skin and also the uterus are stimulated by its use; hence its utility in several cutaneous diseases and in amenorrhœa. From its established efficacy in scrofulous and other cachectic states which indicate an unhealthy state of the nutritive process, it has been regarded by many as a general roborant, more especially of the alimentary canal and of the lacteal and vascular systems. In most cases where the blood is poor and thin, the best authorities assure us that a long-continued use of fish-liver oil exercises a very salutary influence. If this be the case, we can readily understand how it may act in the cure of scrofula, rickets, chronic rheumatism, inveterate affections of the skin, many diseases of the bones, glands, &c. We have already said that in our opinion the therapeutic properties of cod-oil cannot be justly attributed to the small portion of iodine which exists in it. We are quite aware that in many parts of Holland it is given for a length of time to children of a scrofulous family, to prevent the developement of the constitutional affection, so common in that country.

But there is this marked difference between the two remedies; iodine, which is so powerful a remedy against enlargements of the thyroid and other glands, has very little effect in diseases of the bones, whereas it is in these intractable cases that the oil has been found to produce its most beneficial consequences. We are far from denying that the oil may owe part of its properties to the iodine contained in it, and that its action in simple scrofula and in amenorrhœa may depend upon this active principle; but how shall we thus explain its influence in rachitis?

We must here notice the opinion of M. Hoebeke, that a long use of fish-oil has in numerous cases been followed by a deformity of the pelvis in women, who had previously borne children without any unusual difficulty. In all his cases the deformity was observed to have affected chiefly the transverse diameter and the outlet of the pelvis—whereas that arising from rickets is usually at the inlet, and in an antero-posterior direction.

Now, although we do not dispute the accuracy of the statements of M. Hoebeke and others, we feel much inclined to question the explanation which they give, when they attribute the deformity of the pelvis in women, who had been previously well made, to their having taken large or long-continued doses of cod-liver oil. It seems to us more probable to suppose that the softening of the pelvic bones had been an accidental occurrence, quite unconnected with the use of this medicine. We know from the history of other cases that this disease of the osseous system often commences after delivery and not unfrequently during gestation; that its progress is always increased by the latter state; that it has many points of resemblance with chronic rheumatism; that it usually commences with pains in the back and pelvic region; and that it induces a deformation of the pelvis, which is different from that caused by rickets and similar to that observed by M. Hoebeke. The committee appointed to report upon the memoir of this gentleman, very justly observed that in the district where his cases occurred, the climate was damp and unwholesome, and the inhabitants living in great destitution and poverty; that these causes must necessarily have produced great disturbance of the nutritive process; and that the circumstances of cod-liver oil having been taken by the women, in whom the deformity of the pelvis was observed, was probably a mere coincidence, and by no means the cause of the osteo-malacia. This view is the more probable, seeing that this peculiar affection has not been observed in other districts, in which fish oil is largely used as a medicine.

Dr. Delcour has collected together a number of cases of genuine rachitis and of scrofulous disease of the bones of a very unfavorable character, in which the most marked benefit was unquestionably derived from the use of this remedy. The high authority of many of the reporters is a sufficient guarantee for the full accuracy of the statements, and we only regret that want of space prevents us from giving them here at length. When we mention that such a man as M. Bretonneau has been convinced from the results of his own experience of the efficacy of the remedy, we need say nothing more.

As to its effects in inveterate rheumatism, especially when this occurs in a lymphatic and weak habit of body, our author remarks: "There is not a practitioner at Verviers, where chronic rheumatism complicated with scrofula is exceedingly common, who has not had occasion to observe the admirable effects of cod-oil in such cases. By its use, a number of persons, who for a length of time had been almost paralytic and martyrs to protracted suffering, have been not only relieved, but perfectly restored to health. Like every other remedy it does not succeed in all cases; but it has the advantage of being never hurtful. We again repeat that it is much more efficacious in weak than in robust plethoric constitutions."

M. Tauflieb has recorded in the Gazette Medicale for November, 1839, two most interesting cases, in which patients, who had been quite helpless and bedridden for several years in consequence of the swelling and stiffness of their joints, regained, after five or six months' treatment, the complete use of their limbs.

Professors Graefe and Ammon have used the oil in several cases of obstinate rheumatic opthalmia with decided advantage. Their report will be found in the Ophthalmological Journal of the latter for 1832. M. Carron de Villards speaks favorably of it as an application to specks and ulcers of the cornea, unaccompanied with inflammation; and the editor af the Archives de la Med. Belge has given a most favorable report of it in such cases, in the Annales d'Oculistique.

The dose of the cod or ray liver oil is from two to four table-spoonfuls for an adult, and as many teaspoonfuls for children, in the course of twenty-four hours: the patient should close his nostrils, when he swallows it. To counteract the unpleasant eructations, a small portion of anisette, or of rum or brandy, may be taken immediately afterwards. If the mouth be previously gargled with any of these liquors, the taste of the oil will be much disguised. Dr. Fehr recommends the following formula for children: of cod-oil an ounce, of subcarbonate of potash one or two drachms, of oil of the calumus aromaticus three drops, and of syrup of orange-peel one ounce—one or two spoonfuls for a dose night and morning. Or an emulsion may be made by triturating the oil well with gum, sugar and water. When the stomach will not retain it, it may be administered in the form of enemata; and this mode of exhibition has succeeded in a good many cases.—*Archives de la Med. Belge, Juin* 1841.

Remark.—The use of cod and other fish oil is scarcely known as a remedy in this country, at least by medical men. We have indeed heard of cures being effected with it by extra-professional *doctors* in cases of obstinate rheumatism, and affections of the joints, &c., which had baffled the regular practitioner; and we see no good reason why the latter should not avail himself of a new remedy, when those in ordinary use fail, merely because it is a favorite with some empirics. There can be no doubt that fish oil must exert no inconsiderable effects on the system, independently of the iodine which it contains; its penetrating balsamic properties seem to be somewhat analogous to the class of the terebinthinate medicines, most of which are recognized to be most rapidly absorbed, and pervade every organ and part of the body. Those, who may wish to have more details on the subject, will do well to consult the memoir from which the preceding observations have been extracted.—*Med. Chir. Rev.*

Ioduretted Mercurial Syrup for the Treatment of Secondary Syphilis.

Dr. Gibert has for some time been using the following syrup in many cases of obstinate secondary venereal affections.

Take of

Bi—or deuto-ioduret of mercury	1 part (gramme)
Ioduret of potassium	50 parts
Distilled water	50 parts

Dissolve, filter through paper, and then add of

Very clear syrup	2400 parts.

The usual dose is a table spoonful, which may be said to contain one centigramme of the bi-ioduret of mercury, and 50 centigrammes of the ioduret of potassium. The syrup has no unpleasant taste and possesses the great advantage of remaining unchanged for a great length of time.

The proportion of the ioduret of potassium in the syrup is more than sufficient to hold the mercurial bi-ioduret in solution; but, besides that it serves to counteract the tendency of the latter to decomposition, it is in itself a useful remedy; whence the excess is rather an advantage than otherwise.

M. Gibert also occasionally orders the bi-ioduret in the form of pills; thus:—

Take of

Bi-ioduret of mercury	0,10 grammes.
Ioduret of potassium	5,00 ——
Powdered gumarabic	0,50 ——
Honey	q. r.

Make a mass to be divided into 20 pills, of which two or more may be taken daily.

By means of these formulæ, M. Gibert tells us that he has succeeded in curing several cases of inveterate syphilis and scrofulous cutaneous disease, which had long resisted every other remedy.—*Med. Chir. Rev.*

On Rheumatic Dermalgia, or Rheumatism of the Skin.

BY J. H. S. BEAU,

Physician to the Central Bureau of the Hospitals of Paris.

Neuralgia of the skin has hitherto been usually confounded with pains of the nervous trunks, muscles, &c. M. Piorry was the first who referred it to a separate head under the name of dermalgia. It frequently co-exists with neuralgia of the nervous trunks, with ramollissement of the brain; or occurs in cases of inflammation of the spinal cord. Severe pain in the uterus is often attended with dermalgia of the skin of the pelvis and thighs, and clavus hystericus is frequently a neuralgic affection of the skin.

There are several other forms of this affection, but one which has escaped notice down to the present time is rheumatic dermalgia. This is of more frequent occurrence among men than women, and is induced by damp, cold, and those other causes to which rheumatism generally is owing. Hence it is most common at the beginning of spring. The head and lower extremities are the parts usually attacked, but the pain is not stationary in one place; often changing its seat in a gradual manner, just as erysipelas sometimes wanders from place to place. Patients experience two kinds of pain, the one abiding, the other intermittent and severe, resembling the prick of a pin or an electric shock, and recurring about every thirty seconds. The abiding pain is frequently little more than a permanent exaltation of the natural sensibility of the skin. Friction of the part with the finger or with the patient's dress, always increases the pain; and if the affected part is covered with hair, very severe suffering may be produced by passing the hand over the hair. The intermittent pain is often at once excited by touching the part in this manner, and though firmer pressure puts a stop to the permanent pain, the return of the intermittent pain cannot be thus prevented. The intermittent pain is always considerably worse at night. Rheumatism of the skin usually alternates with that form of the disease which affects the muscular and fibrous tissues. Its usual duration is from a day to a couple of days, and it subsides by degrees just in the same way as it made its attack. The author met with three instances in which it was accompanied with fever, and involved a much larger surface of skin than usual. It is, in general, an affection easily curable. The indications for its treatment do not differ from those to be observed in ordinary rheumatism, but it does not generally require any very active remedial measures. To prevent its recurrence, it is always desirable for the patient to wear flannel next his skin.—*Brit. and For. Med. Review.*

Lime Moxa.

Dr. Osborne has availed himself of the high temperature produced by lime in the act of slaking, for the purpose of a moxa. Some quick lime in powder, to the depth of about half an inch, is placed upon the skin inside a porte moxa, or a strip of card bent together, and tied so as to form a circle. Some water is dropped on and mixed with it. In about two minutes the mixture swells and becomes dry, and at the same time a high degree of heat is produced, which, according to some experiments, may amount to 500° Fahr. This moxa Dr. Osborne considers to be superior to all others; first, from the intensity of the heat, which, by using a larger bulk of lime, may equal the potential cautery; and secondly, from its convenience, not requiring the assistance of any heated substance, and being unaccompanied by the emission of sparks or smoke, which create terror in the mind of the patient. When the quantity of lime applied is smaller than above mentioned, or not kept on long, the result is an appearance resembling that produced by acetic acid, and a thick crust is formed, which separates according as the new skin is perfected underneath. When, however, the quantity is as large or larger, and kept on as long as the heat continues, then a complete destruction of the skin ensues; and thus issues may be made of greater depth, and in a much shorter time, than by the usual escharotics.

In order to ascertain the depth to which this moxa acts, he applies it on the surface of an egg, and then observes the thickness of coagulated albumen formed underneath. This shows the extent to which the serum may be coagulated in the vessels of the part, and which is subsequently separated by ulceration as a foreign body; but the beneficial action of a moxa does not stop here: its superiority as an escharotic or counter-irritant, according to Dr. Osborne's view, consists in this, that the heat produces a contraction and change in the action of the vessels of parts over which it is applied, with great excitement of the absorbents, enabling them to return to a state of health after the failure of all other means, as may be seen from the cases related in Larrey's work on this subject, and as is well known and acted on by veterinary practitioners. In one case, at Mercer's Hospital, it was productive of a very decided change. A female labored under the symptoms of ulceration of the upper part of the rectum and sigmoid flexure, for above a year, and had constantly most severe pain in those parts on passing her motions, which were accompanied by discharges of purulent and sanious matter. On being examined, the rectum and lower part of the colon were free from contractions, and the fæcal masses which occasionally passed, although productive of great suffering, yet showed that the passage was not considerably narrowed; a lime moxa, which extended to about the size of a crown, was applied over the sigmoid flexure, and was immediately followed by a diminution of pain and an almost complete cessation of the discharge; and before the ulcer produced by the moxa had filled up by granulations, all the symptoms of the internal ulceration had entirely disappeared. In a case of commencing softening of tubercles, and in another apparently of purulent infiltration after pneumonia, its effect in putting a stop to the ulcerative process was most decided.

In a case of hip-joint disease, in which there was great pain, and consequently loss of sleep, the patient slept well on the following night, and in a few days gained much power over the limb. And in another case of the same disease, which had proceeded to destruction of the joint, and extensive enlargement of the parts around it, a copious discharge of the moxa was followed in a fortnight by a complete subsidence of the enlargement, and a corner of the ulcerated surface is now kept open as an issue, the remainder being allowed to heal under a water dressing. It is to be observed, that the size of the ulcer formed is always much larger than that of the lime applied, in every case having at least twice its diameter.

When the lime is prepared from calcareous spar, the heat produced on the addition of the water is sudden and intense, and the pain is proportionately urgent. For ordinary purposes, however, well selected pieces of lime, from a lime-kiln, answers well if fresh, but not otherwise.—*Dub. Jour. of Med. Science.*

Multilocular Aneurism of the Thoracic Aorta.

Dr. Law said the specimen before him was one of aneurism of the aorta. The patient, a man about forty-three years old, was admitted into Sir Patrick Dun's Hospital about five months since. He complained of violent pain in the left hypochondrium and epigastrium; at the time of admission this was so intense as to oblige him to rest with his knees up to his chin. The history of the case was very imperfect and unsatisfactory, as the man gave a very vague account of his symptoms, and the only thing that could be learned from him was, that he had been for the last two years subject to two kinds of pain, one of which was constant. He also had pains along the course of the ribs, and described a central point in his chest from which the pains radiated on every side. On the third day of admission he began to complain of dysphagia. On examining the chest, Dr. Law found the respiration more feeble on the left than on the right side; he complained of nipping pains in various parts of the left side, and when Dr. Law attempted to introduce a probang, he found its passage arrested about four inches below the opening of fauces. The nipping pains, the dysphagia, and the dulness on percussion in the left side, with the fulness of the veins of the neck, led Dr. Law to suspect that it was a case of thoracic aneurism; but this was by no means certain: there was no bruit de soufflet heard over the region of the heart, or where the aneurism was supposed to be seated, and the diagnosis remained undecided until the appearance of a pulsating tumor on the left side of the back, between the spine and the posterior margin of the scapula, set the question at rest. The appearance of this tumor was attended with increase of the pains along the course of the ribs, and on making an examination, a strong pulsation, accompanied by a distinct bruit de soufflet, was evident, the latter to be heard at various points of the chest, and masking the respiratory murmur. His breathing was tolerably free, except that it was a little more feeble on the left side, and inspiration was longer than natural, as if something was pressing on the trachea. He could not swallow when in the recumbent posture, and always took his food and drink sitting up in bed with his body bent forwards and to one side. Sometimes the difficulty of swallowing was referred to the top of the sternum, sometimes to the epigastrium, and he complained at one time of pains on the chest, at another of pains in the epigastrium and hypochondria; in fact, his symptoms were so numerous and so variable that Dr. Law was convinced that the presence of a single aneurism would not be sufficient to account for them. At the end of about four months he was beginning to feel considerably exhausted; the tumor on the back was now greatly increased in size; it had destroyed the ribs, protruded on the back, and was covered merely by the skin and muscles. When examined, it communicated to the finger a sensation as if its contents were fluid. About the end of the fifth month the man died, partly from exhaustion and partly from excessive secretion into the bronchial tubes. On dissection, a very interesting specimen of multilocular aneurism was discovered; it was of great size, and extending equally on both sides of the spine. Dr. Law said that he had omitted to mention that the pulse at each wrist was nearly equal. In front of the tumor lay the lungs, and this accounted for the absence of bruit de soufflet in the early stage of the disease, the lung overlapping it in such a way that the respiratory murmur completely masked every other sound. The aneurismal tumor seemed to consist of three portions, one to the left which was filled with fluid blood, another lower down, in front of the spine, containing a dense firm coagulum. Dr. Law thought it probable that the disease commenced originally in the right side, and extended afterwards to the left, and that it was this latter portion which had been diagnosed during life. The sac had exercised a slight degree of pressure on the trachea, and on the lung, particularly at the left side. There was no symptom of paralysis. The first symptom was derangement of the stomach and digestive system, and this was followed by the radiating pains and difficulty of deglutition. It was these pains, and the recollection of other similar pains attended by analogous symptoms, which led Dr. Law to suspect the existence of aneurism; for until the tumor presented itself posteriorly between the scapula and the spine, it was impossible to determine its nature with accuracy. Dr. Law said that as the preparation had been only a few hours in his possession, he had not been able to examine it as minutely as he wished, and hoped to be able to bring it more fully before the Society at the next meeting.—*Dublin Journal of Medical Science.*

THE COLLATERAL SCIENCES.

ABSTRACT OF MR. GOODSIR'S PAPER ON THE ULTIMATE SECRETING STRUCTURE, AND ON THE LAWS OF ITS FUNCTION.

(*Read at the Royal Society of Edinburgh, March* 30, 1842.)

After referring to the labors of those anatomists who had verified Malpigi's doctrine of the follicular nature of gland ducts, the author alluded to Parkinje's hypothesis of the secreting function of the nucleated corpuscles which line these ducts. In a rapid sketch of the results of inquiries since the appearance of Muller's work, 'De Penitiore Stractura Glandularum,' and more particularly of the observations of Henle and others on the closed vesicles which are situated at the extremities of certain ducts, Mr. Goodsir stated, that no anatomist had hitherto 'proved that secretion takes place within the primitive nucleated cell itself, or had poiated out the intimate nature of the changes which go on in a secreting organ during the performance of its function.'

Numerous examples were now given of secretions detected in the cavities of nucleated cells of various glands and secreting surface. Among these secretions were the ink of the cephalopoda and the purple of *janthina* and *aplysia*; bile in an extensive series selected from the principal divisions of the animal kingdom; urine in the mollusk; milk, &c.

The wall is believed by the author to be the part of the cell engaged in the process of secretion. The cavity contains the secreted substance, and the nucleus is the reproductive organ of the cell. A primitive cell engaged in secretion is denominated, by the author, a primary secreting cell; and each cell of this kind is endowed with its own peculiar property, according to the organ in which it is situated. The discovery of the secreting agency of the primitive cell does not remove the principal mystery in which the function has always been involved; but the general fact that the primitive cell is the ultimate secreting structure, is of great value in physiological science, inasmuch as it connects secretion with growth as functions regulated by the same laws, and explains one of the greatest difficulties in physiology, viz. why a secretion flows from the free surface only of a secreting membrane—the secretion exists only on the free surface inclosed in the ripe cells which constitute that surface.

The author then proceeded to the consideration of the origin, the development, and the disappearance of the primary secreting cell, a subject which necessarily involved the description of the various minute arrangements of glands, and other secreting organs. After describing the changes which occur in the testicle of the *squalus cornubicus*, when the organ is in a state of functional activity, and in the liver of *carcinus mænas*, it was stated that these were selected as examples of two orders of glands, denominated by the author vesicular and follicular. The changes which occur in the first order of glands consist in the formation and disappearance of closed vesicles or acini. Each acinus might be first a single cell, denominated by the author the *primary* or *germinal* cell; or, secondly, of two or more cells enclosed in the primary cell, and produced from its nucleus. The enclosed cells he denominates the secondary cells of the accinus, and in the cavities of these, between their nuclei and cell walls, the peculiar secretion of the gland is contained. The primary cell, with its included group of cells, each full of secretion, is appended to the extremity of one of the terminal ducts, and consequently does not communicate with that duct, a diaphragm formed by a portion of the primary cell wall stretching across the pedicle. When the secretion in the group of included cells is fully elaborated, the diaphragm dissolves or gives way, the cells burst, and the secretion flows along the ducts, the acinus disappearing, and making room for a neighboring acinus, which has in the mean time been advancing in a similar manner. The whole parenchyma of glands of this order is thus, according to Mr. Goodsir, in a constant state of change—of development, maturity and athropy,—this series of changes being directly proportional to the profuseness of the secretion.

In the second order of glands, the follicular, as exemplified in the liver of *carcinus*, the germinal cell or spot is situated at the blind extremity of the follicle, and the secreting cells, as they advance along the follicle, become distended with their peculiar secretion.

Among other general conclusions, deducible from these observations, it appeared that ducts are to be considered as inter-cellular passages iuto which the secretions formed by cells are cast.

Finally, the author inferred from the whole inquiry, 1st, That secretion is a function of, and takes place within the nucleated cell; and, 2d, Growth and secretion are identical,—the same process under different circumstances.—*London and Edinburgh Monthly Journal of Medical Science.*

ITEMS AND INTELLIGENCE.

Necessity of Surgeons in Emigrant Vessels.

[The important subject to which the following communication refers, has been under our consideration for a length of time. We will take it up in our next number.—Ed. L.]

TO THE EDITOR OF THE LANCET.

Dear Sir :—

If not infringing on a column of your useful journal, and without wishing to presume, I should like to call the attention of owners of the several lines of packets voyaging between our ports and Europe, to the propriety and *gain*, I may say, in engaging surgeons of some experience on board their vessels. The immense extent of emigration almost daily occurring, and the natural expectation of illness, if not an occasional death or two on the voyage, surely calls for some assistance beyond the captain's skill, whose sphere of action is called into a somewhat different field than a medical one, though I would by no means wish to impugn the general knowledge and acquirements of these urbane and gentlemanly commanders; yet I should imagine they would not be opposed themselves to a measure which could remove the *feeling* of a responsibility as to the regulation of health on board. The ship's medicine chest in these gentlemen's hands is often of great service, but they will allow that consultations are at times necessary—in short, medical duty ought not to be imposed on them. When we reflect on the short trips of the steamers backwards and forwards, all of which I believe carry surgeons, though our packets can sometimes cope with them in point of speed, yet added to the crowded state of the sailing vessels, there is certainly greater need for them to be so provided, which, by an arrangement I am about to propose, would seem very feasible. Suppose, for instance, each cabin passenger were to be charged a dollar extra, and the steerage but twenty-five cents each, for the surgeon's benefit. The passengers themselves could not, I should imagine, object to such a slight tax, while many would probably be materially benefitted, and the owners themselves remunerated by a greater proportion of influx to their ships. I would likewise suggest that the surgeon be paid on the return of the packet, so as to ensure against his quitting the vessel on her home passage, unless he should provide a competent substitute in the event of any thing unexpected occurring; or, he might be made to enter into a bond to that effect. A fair pay for medical services would be derived from this source, which might induce many of them to 'stick by the ship,' and in the end all parties would feel satisfied. The cost to the owners would be but the living of the medical attendant on board. The present season calls especially for some arrangement of the sort; and from among the many medical men (some without very extensive practice) there could be no difficulty in selecting eligible persons in whom confidence might be placed. The plan would have but to be once advertised, and the agents might rely on enough candidates applying, and a sufficient succession to fill any vacancies from time to time occurring. If concurred in by the proprietors, action ought to be taken at once on the subject; and from your knowledge and tact about matters in general, you can, I am sure, add considerable strength to the above arguments. Yours, respectfully, J. G. W.

At the Anniversary Meeting of the New York County Medical Society, held on the 11th inst., the following gentlemen were elected officers for the ensuing year :—President, Dr. J. C. Cheeseman; Vice President, Dr. R. K. Hoffman; Treasurer, Dr. Benj. R. Robson; Delegate, Dr. S. Hasbrouck; Corresponding Secretary, Dr. B. B. Coit; Recording Secretary, Dr. H. D. Bulkley; Censors, Drs. E. L. Beadle, H. Sweeny, W. P. Buel, J. R. Wood, Thos. C. Chalmers.

We are requested to mention that the Medical Reading Room, established by the Society for the benefit of its members, is open daily from 8 A. M. until 10 P. M., at the New York Lyceum, No. 411 Broadway. It is furnished with all the American Medical Journals, together with a selection of the best British and Foreign Journals, including the London Lancet and Gazette—the Edinburgh and Dublin Journals—the Gazette Médicale—Hufeland's Journal, &c.

It is FREE to all members of the Society, who will receive their tickets from the Librarian, at the room, by exhibiting their certificates of membership.

Books, &c. Received.

The Principles and Practice of Modern Surgery. By Robert Druitt. From the Second London Edition. Illustrated with fifty wood Engravings. With Notes and Comments by Joshua B. Flint, M. D., M. M. S. S., &c. Philadelphia: Lea & Blanchard. 8vo. pp. 534.

[Notice in our next.]

Report of a Committee of the Medical Society of the State of New York on the subject of Medical Education. 1840. [From Dr. E. B. O'Callaghan, Albany.]

To Correspondents.

Our unknown friend 'J. R. M.' will perceive that we have availed ourselves of his esteemed communication.

'?' is informed that our defence of the cause of medical education against the attacks of the Stuyvesant Faculty may be obtained gratuitously, in separate form, at the publication office.

A number of favors will be attended to in due time.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending July 9, 1842.

35 Men, 36 Women, 54 Boys, 48 Girls. Total, 173.

DISEASES.

Apoplexy	1	Intemperance	1
Asthma	1	Inflammation	0
Asphyxia	0	Of liver	0
Abscess	0	Of bladder	0
Aneurism	0	Of brain	7
Bleeding	0	Of stomach	0
Bleeding from stomach	0	Of chest	1
Bleeding from lungs	0	Of lungs	8
Burned or scalded	2	Of bowels	6
Casualties	1	Of heart	2
Cholera infantum	13	Of kidneys	0
Cholera morbus	0	Insanity	0
Cancer	2	Jaundice	0
Consumption	27	Killed or murdered	0
Convulsions	8	Lues Venera	3
Croup or hives	1	Mortification	0
Debility	4	Malformation	1
Delirium tremens	2	Marasmus	4
Diabetes	0	Measles	4
Diarrhœa	1	Old age	2
Death from poison	0	Organic disease of heart	1
Dropsy	3	Palsy	3
Dropsy in head	5	Rupture	0
Dropsy in the chest	3	Rheumatism	2
Drowned	9	Spinal disease	0
Dysentery	4	Suicide	1
Erysipelas	0	Sprue	0
Epilepsy	0	Small-pox	1
Fever	1	Scrofula	0
Scarlet	5	Teething	3
Typhoid	1	Tumor	0
Puerperal	0	Unknown	3
Remittent	1	Ulceration of throat	1
Bilious	0	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	4
Fracture	0	Worms	0

William A. Walters, City Inspector.

City Inspector's Office, July 11, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, JULY 23, 1842. No. 4.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XVI.

Pneumonia—Several Stages—Their Pathology—Pneumonia of Children, of Adults, and of Old People—Different Characters—Relative Mortality—Statistical Tables of Cases in the Hotel Dieu.

GENTLEMEN:—

We will to-day take up the subject of pneumonia. This disease is of all acute affections of the lungs the most important and interesting, and I shall therefore enter fully into the detail of all the facts connected with it. Pneumonia very often occurs as an idiopathic disease, and still more frequently in complication with other diseases of an inflammatory character, as well as those chronic affections which occur in old subjects and debilitated habits, so that nothing is more common than to find more or less evidence of pneumonia in post-mortem examinations. The importance and necessity then of making this affection the subject of the most careful study must be at once apparent. Another reason why you should most attentively examine every thing connected with this disease, may be found in the fact that its pathology is remarkably well understood, and has been thoroughly investigated in all its details.

Pneumonia is an inflammation of the air vesicles. You recollect that, when speaking of the lining membrane of the bronchi, I remarked that it was mucous membrane, but that as it descended into the minuter bronchial tubes its character became changed and became analagous to serous membrane. I shall consider pneumonia as existing in three stages:—

First, that of congestion—*engorgement*, as the French term it. When you examine a portion of lung affected with this congestion, you find it of a reddish hue—sometimes of a bright vermillion color, and in other instances of a brownish red, and all the shades between the two. When you press the lung between your fingers, you find that it still crepitates like healthy lung, although always when cut open you find on attempting to tear it that it has lost its natural cohesion to a certain extent—it tears more readily than natural—and still more frequently you notice an immense exudation of frothy serum poured out in great quantities from the air vesicles. If thrown into water the lung floats as usual on the surface.

Second, after the stage of active congestion, we have what is commonly called hepatization, from the resemblance which the lung so affected bears to liver. When attempting to compress the lung before the removal of the pleura, you find that it has a very firm, resisting feel, very much like that of liver, although in these circumstances the pulmonary tissue is softer than usual. The lung has also very much the red uniform color of healthy liver, and if squeezed between the fingers it does not crepitate at all; it contains no air whatever. If thrown into water it sinks at once, just as liver or any other solid tissue would. When cut open and pressed, instead of meeting the free exudation of frothy serum which marks the first stage, you find the lining comparatively dry, and observe nothing but a slight exudation of thin, bloody fluid, hardly, if at all, ærated. If you examine the cut surfaces of lung thus affected, you will find that it presents a distinctly granular aspect. You will find little grains about the size of a pin's head more or less distinctly separated from each other. What are these? Nothing more than air vesicles filled up by reddish coagulable lymph, and distended by it sometimes. In the most intense forms of the inflammation you cannot see these granulations, because they are crowded so much upon each other that the line of separation between them is no longer perceptible, and they thus come to present one uniform surface. This stage is called by the French pathologists the 'state of red softening,' for the lung is actually more friable than in the natural condition.

Third, the next stage is that of suppuration. On examining a lung thus affected you will find that it has entirely lost its natural color, and has assumed more or less of a grayish hue, becoming more or less of a yellowish color, till finally it presents a pale straw color. When pressed between the fingers it is found still to possess considerable firmness. You find also that it does not crepitate, there is no air in it, and it sinks when thrown into water. When cut open these reddish granules present the same forms that they do in the former stage, but they are more yellow. The coagulable lymph has now become more or less of the character of concrete pus. It is also more friable and easily broken down than naturally; and you will observe in many cases when the disease advances, a disposition in these granules to run together, and assume more or less the appearance of abscesses. But abscess resulting from inflammation is here an exceedingly rare circumstance. You may, however, if you make many post-mortem examinations, meet with a case or two of this sort. Sometimes pathologists suppose that they meet with abscess of the lungs, when in truth they make the abscess themselves. Push your finger into a suppurating portion of lung, and you will make a cavity which will be filled up with pus, and present very much the appearance of a recent abscess. The truth is, that abscess resulting from inflammation during life is, as I remarked, exceedingly rare; though there is often an evident disposition to the formation of an abscess, that point, however, being seldom or never reached before death occurs. These then, gentlemen, are the three stages of inflammation of the lungs.

Now there is another consequence of acute inflammation of the lungs—that is gangrene. We know that this is frequently the result of acute inflammation, but there is an idiopathic gangrene, not produced by inflammation, but by obstruction to the circulation. In old people this sometimes arises from ossification of the arteries, by which a secondary inflammation is induced, and the gangrene forms a sort of effort of nature to remedy the difficulty. Just so I conceive to be the fact in these cases of gangrene of the lungs. We do not see in cases of acute inflammation of the pulmonary tissue, however severe, any evidence of gangrene. Dr. Forbes, the accomplished translator of Laennec's work, says that he has never met with a case of gangrene of the lungs, and this surprised me a good deal, as this gentleman has had most enlarged experience. But this statement shows very clearly that the affection is very rare. It is then rather a state of things analagous to the gangrene of old people, and depends on some obstruction of the small arteries which supply the lungs with blood. This gangrene presents itself in two forms—both admirably described by Laennec.—The most rare form has been termed the 'diffuse gangrene.' If you examine a lung in this state, you will observe that it has a mottled appearance, a bright red color mixed up with a brownish red. The reddish spots are the results of inflammation, and the brownish black spots are the portions of lung affected with gangrene, mingled with the former without any distinct line of demarcation; and hence called 'diffuse gangrene.' When cut into, you find a sort of imperfect cavity filled with a sanious discharge, mixed up more or less with shreds of dead cellular tissue, precisely like those met with in cases of phlegmonous erysipelas. The most common form of gangrene of the lungs is that termed the 'circumscribed' This form of gangrene presents very much the appearance as if a piece of caustic potass had been applied to the lung, leaving a circumscribed brownish black eschar, more or less of an oval form, and surrounded by pulmonary tissue, either perfectly healthy, or as is more commonly the case in the first and second stage of acute inflammation, showing that gangrene may exist when surrounded by tissue, either healthy or inflamed. Sometimes the discharge opens into the pleura, constituting pneumothorax. Very frequently, if one of those eschars which I have described suppurate, you will find the cavity thus formed lined by a distinct false membrane. I have seen one large enough to contain a pint or more of matter, and lined by a well organized false membrane. This gangrene, then, is not to be looked on exactly as the termination of inflammation, but as depending, as I have already stated, on obstruction of the arterial circulation, producing secondary inflammation, just as in the gangrene of old people.

In order to understand the subject of pneumonia perfectly, we must take many other points into consideration besides those changes which may be said to be universally belonging to all forms of acute inflammation of the air vesicles. Pneumonia, to be understood properly, must be viewed as presenting different characters at different periods of life. You must recollect that the pneumonia of young children is in many respects very different from that of adults, and that the pneumonia of old people is different from either. We will then consider the disease as occurring at three distinct periods of life, and shall accordingly speak of it as affecting children under six years of age—as affecting adults between the years of six and forty-five, and as affecting old people, or those above the age of forty-five or fifty. Now, in marking these distinctions, you must not think that there is a well-defined line of demarcation between them; that is to say, it is not to be assumed that when a child is more than six years of age, the disease presents quite a different character from that which it presents when it attacks a child under that age. But it is a fact, that if it have passed the age of six years, a child affected with pneumonia exhibits symptoms different from those presented by a child under that age.

Now let us consider the most common and simple form of this inflammation—that is the pneumonia of adults, including those cases which occur between the sixth and forty-fifth years of age. Pneumonia, when it attacks a healthy lung in an adult, usually spreads over a continuous surface. It spreads rather superficially than deep, and does not manifest the same disposition to penetrate into the substance of the lung, as to diffuse itself over a continuous surface. This, then, is the first characteristic of pneumonia. Again, we notice that the disease almost always has a particular site. It invariably begins in *one* lung, and almost always at the lower and posterior portion of that lung. Recollect that as of immense importance in the physical diagnosis of the pneumonia of adults. Starting from the point just described, the disease spreads upwards, penetrating more or less deeply into the surface of the lung, frequently extending quite up to the upper lobe before it has penetrated through the thickness even of the middle portion of the lung. In old people we notice a very distinct difference. In them we find that in the greater number of cases the disease begins at the superior portion of the lung, and the older the patient the more likely is it that the inflammation will affect this portion of the organ. I will simply state one fact, which will show the immense importance of recollecting what I have just remarked respecting the site of pneumonia in its commencement. Very often in young people it is accompanied by the deposition of tubercles, and this has been proved by subsequent examination. Now in old people who are comparatively not disposed to the deposition of tubercles, the occurrence of this in the upper part of the lung is only the natural course of things. You will see at once the immense importance of recognizing the site of the disease in different cases. In thirty-one adult cases thirteen were under the age of forty-five—of these, eleven were inflammations of the inferior lobe and two only of the superior lobe. Eighteen cases were past the age of forty-five years—of these, eight were of the superior, eight of the inferior, and two of the middle lobe. Thus in the first instance we have the superior lobe affected only once in seven cases—while in the second instance this occurs in half the cases.

When pneumonia attacks young children under the age of six years, it presents quite a different character. Instead of spreading over a continuous surface, as in the case of adults and old people, we find that it attacks separate lobules of the lung, so that when you come to examine the lung of a young child laboring under this disease, you find that instead of presenting uniform resistance to pressure it is modulated, presenting little lumps surrounded by healthy pulmonary tissue. In these cases, we notice as the disease goes on that the 'lobular inflammation,' as it is called, tends to become generalized, that is, lobule after lobule are affected till all are involved. This, then, is the character of pneumonia in young children under the age of six years. In children past that age we occasionally find this lobular pneumonia, but it is of rare occurrence. It is a very remarkable fact that as soon as children pass the age of six years, the disposition to this form of pneumonia ceases and entirely disappears. As to the site of the disease in children, it is the same precisely as in adults—that is, the posterior and inferior portion of the lung. We very seldom find pneumonia in young children affecting the superior portion of the lung. I have met with one case, in which I made a wrong diagnosis, supposing that it depended on deposition of tubercles, and it was the first and only case I have met with in which the superior portion of the lung was the seat of the pneumonia. It is then necessary that we should be on our guard on this point. But recollect that in young children, and in adults before the age of forty-five years, pneumonia affects one lung first, and the posterior and inferior portion of that lung, exhibiting the characteristic physical signs of the disease as it progresses;—that in old people, and in proportion to their age, the pneumonia changes its site, and discovers a disposition to attack the superior portion of the lung,—the very reverse of its usual site in adults.

Pneumonia, as I have remarked, usually affects only one lung, although it is not uncommon in fatal cases to find both affected, but the affection of one lung is a secondary affair, and not developed simultaneously with that of the other. And in these cases you will almost always find the evidences of inflammation much less strongly marked, as well during life as after death, in the lung last affected than in the other. It is a singular fact that the right lung should more frequently be affected than the other:—In 59 cases verified by autopsy, 28 were affected with inflammation of the right lung, 15 of the left, and 16 of both lungs.

Thus much then for the influence of age upon the site of the disease, and its peculiar form and character. Now we shall find if we study this disease in reference to its mortality, that it presents very much the same differences, and that the pneumonia of young children is much more fatal than that of adults and old people. So, in forming your prognosis in a given case, you should take into consideration not only the strength of the patient but also his age. In young children pneumonia is a very fatal disease. Dr. Gerhard has stated that in sixteen cases twelve were fatal; and the statistical returns of the Children's Hospital in Paris presents a similar result. It is to be recollected, however, that in children the disease frequently supervenes in some other acute affection, such as scarlatina. Again, when the disease attacks adults between the period of twenty and thirty years of age,—the medium period,—about one in every seven or eight cases proves fatal. But as you climb up higher and higher in the scale of age, you find a gradual increase in the mortality.

The following tables will illustrate most distinctly the direct influence of age on the mortality of pneumonia. Thus, in fifty adult cases admitted into M. Chomel's wards, Hotel Dieu, Paris, in 1835, the mortality was as follows:—

From 15 to 20 years	..0·5	From 40 to 60 years	..1·3
20 to 40 “	..1·5	over 60 “	..1·2

The following table, obtained at La Charité, will further illustrate the same general fact:—

From 18 to 30 years	..1·10	From 50 to 60 years	..8·15
30 to 40 “	..2·09	60 to 70 “	..1·02
40 to 50 “	..5·11	70 to 90 “	the whole

LECTURES ON GONORRHŒA AND SYPHILIS;

BY

JOHN HUNTER, F. R. S.

DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON.

[*From MS. Notes of Dr. Thos. Shute.*]

Lecture IV.

ON THE TREATMENT OF THE CONSTITUTION IN VIRULENT GONORRHŒA.

In some patients it is necessary to attend throughout the cure entirely to the constitution; in others not at all. In very strong and plethoric constitutions, the symptoms frequently run very high; in such, evacuations are necessary, bleeding, and gentle purges. Opium, in such cases, ought not to be used, for when it loses its sedative effect, it generally increases the action of the arteries. Balsam of copaiba is given indiscriminately by some people, but that in some cases must have a bad effect, for the balsams generally heat patients. Where there is considerable inflammations, sitting over warm water which has a little vinegar and spirits in it, is an excellent method of fomenting the parts. Rest and living low are very necessary, allowing the parts to relieve themselves. The constitution is easiest to manage of any, for by reducing it the disease usually goes on very well. It is much easier to lower a constitution than to raise one properly that is weak. The nervous constitution is much more difficult to manage, it generally sympathising violently with the disease. Bark and mild applications are necessary. It is necessary to give the bark to destroy the irritability of the habit.

A gentleman, of a hypochondriacal disposition, who was continually quacking with his constitution, got a clap; the symptoms were numerous and urgent. The surgeon who attended him treated him with cooling medicines and gentle evacuations for a week, during which time he grew worse and worse every day. I was then called in. I found the inflammation very considerable, spreading entirely over the glans, which had a transparent appearance in every part. I advised letting the clap alone, and entirely to attend to the constitution. The bark was then given very plentifully, and he began to mend immediately; he continued it for a fortnight, at the end of which time he was quite well, without doing any thing else.

A fever will remove every symptom of a clap, and if it continues long, will quite cure it. The constitution, therefore, by being generally affected, will remove all symptoms that are local, and if continued long enough they will never return. On this principle, probably, a clap might be cured by keeping the patient drunk for a week. Every thing which increases the circulation tends to increase the symptoms; therefore, eating hot spices increase the pain and inflammation, but increasing the symptoms sometimes has a tendency to hasten the cure. Eating pepper to such an excess as to raise a fever, and continuing it, might cure a clap. Diuretics, given with gum arabic or linseed tea, will lessen the symptoms by increasing the secretion, and diminish the acrimony of the urine. Diluting much in nervous constitutions, will tend to increase the symptoms, by increasing irritability. The signs of a cure are known by an abatement of all the symptoms. The weariness goes off, the glans becomes wrinkled, and the running more slimy, there being fewer of those globules in it which gives the whiteness, &c.—Sometimes all the symptoms will return with greater violence than before, after they have ceased some time. Perhaps this return is not venereal; it can only be determined by knowing whether it is capable of infecting another. A young gentleman, of a very sober disposition, got a clap, which I cured by injections and small doses of physic. A month after all the symptoms had ceased, the clap returned upon him with greater violence than ever.

After patients are perfectly well, strange sensations frequently continue in the glans and urethra for long after; these go gradually off. From these sensations people are very apt to suppose that they are not perfectly cured, and that the clap will break out again, which there is no more reason to believe than that a bone is going to break again because it is painful at times after getting well. Such uneasy sensations are common to all parts after they have been much injured, and frequently after compound fractures and large wounds, they will return at intervals upon change of weather during life. When parts sympathise with others, it is not certain when such a sympathy will cease.

When the testicles have swelled, an enlargement, especially of the epididymis, will frequently continue for years, and sometimes during life. Such enlargement and hardness never produces any bad consequences. Sometimes the testicle perhaps becomes useless, for I have sometimes attempted to inject such hardened epididymes, and have found them imperforate. A surgeon of sixty years of age, had, when a young man, both his testicles swelled, and the epididymes continued enlarged to this day, without any impediment to emission. He is father to a large family. The chordee goes off gradually, which is a proof that it is not always a spasm. Sometimes, however, it is fluctuating; therefore in those cases it must be spasmodic. During the cure of a clap, some attention should be paid to the absorption of matter, for it may be taken into the constitution imperceptibly. For fear of consequences, it is therefore necessary to give some mercury towards the end of the cure; a small quantity will be sufficient, for a very little mercury will destroy the disease while in the constitution, and before it has made an attack on any part. Twenty pills, with one grain of mercurius calcinatus in each, will be sufficient. Perhaps there is not more than one case in a hundred where any absorption takes place. When patients have been much physicked, there is a greater probability of their being poxed than at another time, for reducing the constitution very much causes the absorbents to bring every thing in to its support. Giving mercury at the beginning of the disease can do no good, for it will not in the least facilitate the cure of a clap. Many consequences remain after claps, such as gleet, fistula in perinæo, &c.; these will be spoken of hereafter. The cure of women must be nearly the same as in men. Injections should be used, and the inside of the vagina anointed with unction. If the urethra is inflamed, it will be proper to inject it, but it is hardly possible for a woman to do it herself. The small glands in and about the vagina frequently suppurate, from their ducts becoming inflamed. These should be treated as chancres; a free use of unction being necessary.

Lecture V.

ON GLEET AND STRICTURES.

A clap will wear itself out, because its continuance depends on a stimulus, which by time must lose its effect on the part. On the contrary, a gleet is a continuance of the discharge arising from a habit which the parts have acquired, and not depending on any stimulus. This habit is a disposition in the parts to produce such discharge. This discharge sometimes ceases of itself after it has continued for months, and sometimes even for years. Pus appears to be serum, mixed with a great number of globules, which gives it whiteness. The discharge in a gleet appears to be mucus, mixed with a small proportion of such globules. This discharge very readily turns to pus on any intemperance, eating spices and indigestible food, or drinking, &c. As this disease is not specific, there is no fixed mode of cure; and from the difficulty of knowing the constitution and state of the parts, it is not easy to determine the mode of cure. It may be treated constitutionally or locally; in each there are three modes of cure. The first method constitutionally is by giving medicines which act particularly on the parts diseased—such as the balsams. The second by giving medicines, and using such means as will strengthen the constitution—as the bark, steel, cold bathing, &c. The third mode is by giving astringent medicines.

Of the Local Methods of Cure.—First, injections to strengthen the parts, made of the balsams and turpentines. The second, astringents—as the bark, white vitriol, &c. The third, stimulants—as sublimate, bougies, &c. Each of these methods cure by altering the disposition of the part; the last of them should only be used where the others have failed, it being a violence on the part. It always produces a greater discharge than that of the gleet. The time necessary to perform the cure is in proportion to its violence, and the duration of the acquired habit. A gleet of only a fortnight standing may be cured much sooner than one of a year. When the method of cure is by stimulating the parts, it is necessary to know how long that stimulus should be continued, for we can then form no judgment by the discharge. If bougies are used, it will be necessary to continue them for a month or six weeks. They ought to be of rather a smaller size than the urethra, and not above four or five inches long.

Violence will sometimes cure at once. A gentleman who had had a gleet for two years applied to me; I gave some of Goulard's extract to dilute and inject; by mistake he used it as it was; it gave him excessive pain, and caused considerable inflammation; in three days the inflammation ceased, and he had no return of his gleet. Turpentines have a specific action on the urethra and those parts; a few drops for a dose will produce considerable effects. Violence or bougies almost always cures, but patients seldom will submit to the use of a bougie until the gleet is very troublesome. When a gleet is stopped by an injection, it is necessary to continue the use of it for some time, for when parts are got into an habitual action they very readily return to that action again. The actions of the body and mind are exactly the same. When the mind has been habituated to any particular way of thinking for a length of time, it is difficult to get it into another mode of thinking, and when it has acquired this new action, if it is put out of that way, that is confounded as by drinking, then it will return to its old habit again; thus it is with the body. Rest is necessary in the cure of a gleet, and should be continued for some time after; for riding, drinking, or any intemperance will be very apt to make it return, especially when it has not been long stopped. Gleets, however, are exceedingly whimsical, for sometimes they will be cured by the reverse. After a patient has continued quiet for a month, and then rode, it has stopped it.

On Diseases which are supposed to arise from Claps.—Strictures in the urethra arise from a tightening of the canal, which never extends above the breadth of a line, appearing as if the penis had been tied with a cord. This disease is frequently called caruncles, and excrescences, but I never found any other disease existing than the tightened urethra, although I have opened a vast number of such cases. I, however, can conceive something like a polypus forming there as in the uterus. This disease is always supposed to arise from a clap, but I doubt whether it ever arises from that cause. It is generally attributed to such cause, because there are few people who have not been clapped. It does not come on at that time. It has been supposed to arise from the healing of an ulcer, the cicatrix forming the stricture; but it has been denied that any ulcer ever exists in that part, and besides, if there was, it could not be from the healing of an ulcer; its progress is usually so very slow, being generally years in coming on. No ulcer would be so long in healing. The same kind of strictures are frequently to be found where no clap could ever have existed, as in the œsophagus and intestines, therefore why should it be particularly attributed to the urethra? This disease also frequently exists in the bulb and membranous part of the urethra, which never are the seat of a clap. If it was the consequence of a venereal affection, it might be expected to extend further. I suppose that the number of strictures in the œsophagus, may be equal to those in the urethra, although the number of the latter at the same time far exceed the former. That is, those who have strictures in the œsophagus, generally die in two or three years, whereas those who have strictures in the urethra, are seldom killed by them; consequently the number of the latter living must far exceed the former. Another reason for this opinion is, that they are seldom situated in that part of the urethra which is the seat of the clap, but most frequently in the membranous part and bulb. If fifty people with strictures are examined, there will not be above one in the whole number who has a stricture where a clap has been situated. The contracted part of the urethra is whiter and harder than the other part: it is usually attended with some discharge. In curing a stricture, discharge is produced. The cure is to be performed, either by dilating or destroying the stricture. For dilating the urethra bougies are to be used, which act merely as a wedge, having no other property whatever.

These strictures come on very gradually, being first observed by the stream of urine lessening, which very gradually increases; it is generally late before patients apply for relief, therefore it is frequently very difficult to get a bougie to pass. It often requires repeated trials to hit the place; a great number of bougies may be introduced without being able to get into the stricture, when one at last may happen to enter; when one has been found to enter, we should then introduce another similar to it at the point. The best time of introducing a bougie is immediately after making water, the passage then being more open. When the bougie is to produce ulceration, it is better to be as large as can be introduced. Little force ought to be used in introducing a bougie, for the stricture being the hardest part, if much force is used, it will slip off the stricture, and ulcerate the side of the urethra into the corpus spongiosum. If half an inch is gained without getting through the stricture, it is certain that the bougie has got out of the urethra into the corpus spongiosum, and is there making a new canal, for the stricture is never above a line's breadth. When a bougie cannot be introduced, and its removal is attended by ulceration, produced from the pressure of a bougie, a large one will be best, it not being so liable to make a new canal.

A soldier in the horse guards had a stricture in his urethra. Bougies were used by the surgeon until he had gained three inches, being able to pass them as far as the bulb. Notwithstanding so much had been gained, it was still as difficult for him to make water as ever. It therefore appeared to the surgeon that the whole canal was contracted. An operation was then proposed, which was to cut in upon the extremity of a staff, where it stopped in perinæo, and then attempt to make an opening into the bladder. In performing this operation, it was found difficult to get into the passage; by cutting in different directions to find it, they at last opened a canal accidentally, which they found led up to the penis, by the side of the staff, and without touching it; this passed as far as the old stricture, and there stopped. It was then found that what had been gained by the bougies was only the making of a new canal on the side of the urethra in the corpus spongiosum, the stricture still remaining as at first. To get through the stricture two silver canules were introduced, both of them open at their extremities. One was passed up the urethra, through the wound, to the stricture, the other passed down the urethra, and placed opposite the first. An instrument was then thrust from the lower canula through the stricture into the upper canula, and afterwards a bougie introduced through the lower in the same manner, and afterwards turned into the bladder, not being suffered to continue through the wound. Bougies were thus kept in the urethra until the external wound and that in the corpus spongiosum were both healed. This patient soon got well.

In curing strictures with bougies sometimes, it is very tedious, and the patient becomes tired out; therefore, it is not amiss to change the color of the bougie, and to use red, this serving to amuse him. When we are introducing a bougie, it is no proof that it is passing because it continues to enter, for it may be bending; this, however, will be known by the feel, to one who is accustomed to pass bougies. When it bends, if let go it is found to recoil, but if it is not bent it will keep its situation. The recoiling of a bougie when bent arises not only from its elasticity, but also from the contraction of the urethra, which, when thrown out of its course, is endeavoring to recover itself again. If the bougie has entered the stricture, the mark of it will be seen at the end, the wax will be found squeezed up a little at that part. Likewise, when the bougie has entered, it will be found to jerk in withdrawing it, from the stricture embracing the end. It is necessary to continue the use of the bougies after the patient is well, for there always continues a disposition in the urethra to contract again. If the bougies do not get through the stricture in a fortnight or three weeks, I always make use of the caustic to destroy it. I introduce the caustic through a silver canula upon a piece of silver fit to hold a pencil, therefore the caustic cannot touch any other part of the urethra. Sometimes by touching it once the urine will pass in a full stream: two or three times is almost always sufficient. The stillette of the canula is rounded at one end, and as large as the diameter of the cavity; this should be passed through the canula to facilitate its introduction.

Strictures when removed are very apt to return in three or four years, I therefore think that it will be better to use the caustic in all case, as it will probably, by destroying the part, prevent the return. This operation is very easy as far down as we can make the urethra straight, but, where it bends, it is difficult, because a curved canula will be apt to knock off the caustic. To remedy this inconvenience, a canula should be used that is so flexible at the extremity as to take the bend of the urethra, the caustic being first introduced. Bougies, by being kept pressing against a stricture, may cause it to ulcerate and by that means remove it.

REVIEW DEPARTMENT.

Experiments on Kiesteine, with Observations on its Application to the Diagnosis of Pregnancy. An Inaugural Dissertation for the degree of Doctor of Medicine, published in pursuance of a recommendation of the Medical Faculty of the University of Pennsylvania. By Elisha K. Kane, M. D. Philadelphia: 1842. 8vo. pp. 32.

We have received from the accomplished author, a copy of this valuable and interesting paper, and lose no time in presenting to our readers the principal portion of its contents. After a succinct account of the results of the labors of his predecessors in the interesting investigation which Dr. Kane has pursued with such diligence, ability, and success, our author proceeds to detail his own experiments:—

My mode of conducting the experiments was this. The recent urine was placed in open glass cylinders, of diameters varying from an inch and a half to that of a common tumbler, and protected from dust by paper covers. These were arranged in a dry, well ventilated room, where the temperature was uniform and moderate, and were exposed in groups to the equal action of air and light. I examined them frequently during the day; but as the changes were not rapid, I determined after a little while to note only one set of observations in the twenty-four hours. My notes were always made upon the spot. If from any cause, an individual observation or a series was unsatisfactory, or inconclusive; or if it led to a different result from others, I repeated it at once with increased care; and I was always careful to observe the constitution, habits and circumstances generally of each patient.

The examination of the first group of cases satisfied me, that the urine during pregnancy assumes appearances different from those witnessed under other circumstances, and which I was therefore disposed to regard as characteristic of that state. Subsequent inquiries confirmed me in the general accuracy of this opinion, but compelled me at the same time to admit its liability to exception.

The more obvious of these appearances regard the superficial formation described by Dr. Bird, and recently investigated by Drs. McPheeters and Perry; but there are others which point to a series of intestine changes somewhat more obscure, though scarcely less interesting. My observations applied to both; and I regret that the limited time at my command during the studies preliminary to graduation, obliges me to select a single class as the subject of this dissertation. I take, however, that indication which seems to me best fitted for practical usefulness in diagnosis, the pellicular change, and which I suppose to be most properly called the kiesteine.

The urine submitted to observation in the way I have described, presents but little change during the first thirty-six hours. The mucous flocculi, if they exist, gradually subside during this period, forming a whitish cloud-like deposite at the bottom and sometimes on the sides of the glass; while more or less alteration occurs in the color and transparency of the fluid.

The surface remains for a short time entirely unchanged; but in most cases, a greater or less number of shining acicular specks, apparently crystalline, begins to be seen within the first eighteen or twenty-four hours. These are generally scattered over the surface without regularity; but in some rare cases, they are so disposed as to form a translucent film of uniform thickness, which afterwards assumes the more defined characters of the pellicle. How far these crystals are essentially connected with the formation of the pellicle, I am not prepared to say. In many cases, I have not succeeded in detecting their presence, even by the microscope; and, indeed, I have failed to discover any unvarying indications whatever of the approaching development of the kiesteine.

The cloud-like appearance, which is alluded to by Nauche and Eguisier, although possessed of much interest, I have not found to be a uniform premonitor of the forming pellicle: I have supposed it to be nothing more than the encœorema of the older writers, depending upon the imperfect aggregation of mucous flocculi; for I have seen it repeatedly when there was no pregnancy to account for it, and it was uniformly absent where the fluid presented perfect transparency.

The time at which the pellicle begins to form varies considerably. I have seen it well marked at the end of thirty-six hours, and have known it make its first appearance as late as the eighth day. At first, it is hardly discernible. It is generally seen forming at the centre or on the sides of the glass, presenting a delicate milky or bluish white aspect. It is, however, in some cases uniformly disposed over the surface from the commencement, and assumes the appearance of a nearly transparent film, which gradually becomes more distinct. But it has not always the continuous strongly marked character, which some have ascribed to it. I have seen it begin in striated irregular lines, somewhat resembling a spider's web, in rings, circles, trapeziums, and irregular figures of almost every shape, which gradually become obscured by the full development of the pellicle.

When it has attained this stage, which occurs generally about the fifth day, it presents a continuous scum of an opaline white or creamy appearance, with a slight tinge of yellow, which gradually becomes deeper and more decided. The uniformity of this color, however, is generally broken by granulated spots of a clearer white, giving it a dotted or roughened aspect. The crystals of the forming stage now appear like shining points, and I have sometimes found numerous small brownish specks, sprinkled over the surface, not unlike the gratings of nutmeg. It is at this period that the pellicle may be compared 'to the fatty scum of cooled broth.'

In this state it continues for some time, preserving all its characters unbroken. The glass, where the surface meets it, is discolored by a white opaline ring; and a series of such rings, varying in extent from a line to the fourth of an inch, marks the descent of the surface during the progress of evaporation.

The cheesy odor, mentioned by Dr. Bird as a valuable aid in diagnosis, and as 'by no means unfrequent in those specimens in which the pellicle is very thick,' I have found in but seven cases. Many pellicles of great thickness were entirely without it; and in two of those presenting it, the pellicle was thin and not very well developed. Drs. McPheeters and Perry were unable to detect it in either of the twenty-seven cases examined by them, and I have found it unequivocally developed in at least three cases in which pregnancy did not exist.

The pellicle, if left undisturbed for some days, breaks into cracks, commencing generally from the central portions, but not always extending to the edge of the glass. These are again crossed by other fissures, and the pellicle is more or less broken up. In the mean time, the flakes, which have been forming from the commencement of disintegration, have their edges depressed into the fluid, while at the same time the general thickness of the pellicle is much diminished; and this depression or dip gradually increasing, the depending particle is detached, and sinks slowly to the bottom. Its complete disintegration, however, is but seldom seen; being anticipated by the decomposition of the fluid. The deposit is of course considerably increased by the fallen portions of the pellicle, and is found irregularly disposed over the bottom of the vessel; but as I have remarked, most abundant on the side furthest from the light.

I cannot agree with those who consider this deposit as presenting well marked distinctive characters to the eye, and I certainly have not found it uniformly coincident with the approach of the pellicle. It has indeed in many cases been absent at that period; and in others, until augmented by the detached pellicle, I have been unable to distinguish it from the very many deposits found in other urine. How far a chemical investigation may give it value, I am not prepared to say: although its liability to be confounded with other sediments makes it practically unavailable as a test, it offers a fine field for microscopic and chemical research.

This description of the appearances and changes of the pellicle, though more detailed than those of Nauche and his followers, still applies only to the better defined examples. In a considerable proportion of cases, some of the phases mentioned are not to be found together; and I have not been able by the most careful observation to discover the causes of variance. This I allude to here, because the absolute and unqualified language, which I have met elsewhere upon the subject, seems to me calculated to mislead the unpractised inquirer.

It must not, however, be inferred that the presence of kiesteine is determinable only by vague and undefined characteristics. On the contrary, the tables which are appended to this dissertation, will show that they are as well defined as most pathological phenomena, though like them they sometimes require for their discrimination a practised comparative scrutiny.

The table marked A exhibits a condensed record of my observations, more or less frequently repeated, on the urine of eighty-five pregnant females. Of these, as will be seen, sixty-eight gave a well marked pellicle of the sort called kiesteinic, eleven gave the pellicle under a modified form, but with appearances which enabled me to recognize it clearly, and six gave no pellicle whatever. Of these last, one was laboring under mammary abscess and convalescing from typhoid fever, and one was in a condition of extreme anæmia from repeated uterine hæmorrhages; but the others, unless they succeeded in practising reiterated deceptions on me, which I can hardly believe, must be regarded as absolute exceptions.

The particulars in which the kiesteine differs from other pellicles regard the manner of its formation and departure, even more than its appearance when developed. As I have already mentioned, it generally begins to show itself within a day, or at furthest within two days after the discharge of the fluid, and advances gradually to its complete development. The other pellicles, on the contrary, rarely give indications of their approach until the fluid has stood a longer time, or even till decomposition has supervened, and then form with rapidity. I have known them entirely defined within a few hours. The kiesteinic pellicle, when fully formed, has almost always a much greater degree of tenacity than the others: I have often, for purposes of microscopic examination, lifted large flakes entirely out of the urine; and when it was well defined, this was easily done: with the others it was never practicable. It seems also to be independent of putrefaction; it is not obscured for some time by the disorganization of the liquid on which it rests; and the characteristics which I have already described as accompanying its disappearance are very seldom simulated.

The appearances which I have observed seem to point directly to the conclusion, that the formation of the kiesteine is unconnected with the presence of extraneous pus or flocculent mucus. I was aware that these and other animal matters might under certain modifications give rise to a scum upon the surface, the 'cremor urinæ' of the older writers. This has been noticed by M. Becquerel, as especially observable in leucorrhœa; and I have observed it very frequently, not only in that disease, but in cystitis, gonorrhœa, vaginal and uterine hæmorrhages, and immediately after delivery when the lochial discharge was mingled with the uterine.

In the present state of physiological chemistry, but little can be determined with regard to the nature of the kiesteine, and its very doubtful claims to be considered as a new principle. The absence of coagulation by appropriate agents indicates in a measure that neither caseum nor albumen exists in very perceptible quantities; while the acid reaction up to the moment of disintegration seems opposed to the idea of its being a mere attendant upon increased quantities of pus or mucus.

The pellicle, taken immediately from the urine on a glass plate, carefully introduced, when examined with a magnifying power of one hundred diameters, exhibited, while yet moist, a well defined series of flakes of a somewhat darkish yellow, made up apparently of minute granules. This appearance, which I at first thought to consist of minute globules of mucus or pus, was at once recognized by Dr. Goddard, as closely resembling, if not identical with, the granules of the colostrum. Having with some difficulty procured a supply of this fluid, a comparison of the two exhibited still more clearly this interesting resemblance. The granules of the kiesteine were, however, more flattened than those of the colostrum, a change they might readily have undergone during their passage through the kidneys; but the general aspect of the two was such as to give strong evidence of their identity.

Connected with these appearances, and sometimes obscuring them, the kiesteine presented under the microscope an irregularly disposed amorphous matter, sometimes arranged in groups of granules that resembled the urate of ammonia, and sometimes of badly marked globules, allied to those of pus or mucus, and accompanied by laminæ resembling epithelia.

Throughout the field of the instrument was seen, in varying numbers and distribution, a series of rectangular rhomboidal prisms, more or less distinctly marked, and strongly refracting light. The triangular prisms were also occasionally distinguished, but not in the 'myriads' seen by Dr. Bird, and sometimes other crystalline forms were observed in addition to these. They all belong most probably to some of the earthy phosphates. Not only were the triangular prisms recognized to be those described by Dr. Bird, as belonging to the ammoniacal phosphate of magnesia, but by comparing them with the microscopic plates of Rayer and Vigla, and Mandl (Etude Microscopique sur l'Urine), many others were discovered, coinciding with the varied forms of this prominent salt.

I cannot regard the kiesteine as an unerring test of pregnancy. I have already shown that it is present under other conditions of the system; and even where pregnancy exists, I am satisfied that this indication is not alway observable.

I am convinced too, that the kiesteine is not always distinguishable from other pellicles which appear on the surface of the urine. At least, I am bound to say, that, in the absence of other indications, I should sometimes have found myself unable to distinguish between them. Not that they are generally liable to be confounded; but between the imperfectly developed pellicle of the one character, and the best simulation of it which is sometimes presented by others, the distinction is too slight to be satisfactory or unfailing.

But with the qualifications which these remarks imply, I have no doubt that the pellicle which has been denominated kiesteine is among the best, if indeed it be not the most certain, of the earlier indications of pregnancy. I resorted to it habitually in my diagnosis in the obstetric wards of our hospital, and with constantly increasing confidence.

Our author thus sums up his general conclusions:—

1. That the kiesteine is not peculiar to pregnancy, but may occur whenever the lacteal elements are secreted without a free discharge at the mammæ.

2. That though sometimes obscurely developed and occasionally simulated by other pellicles, it is generally distinguishable from all others.

3. That where pregnancy is possible, the exhibition of a clearly defined kiesteinic pellicle, is one of the least equivocal proofs of that condition; and,

4. That when this pellicle is not found in the more advanced stages of supposed pregnancy, the probabilities, if the female be otherwise healthy, are as 20 to 1 (81 to 4) that the prognosis is incorrect.

Dr. Kane then gives his statistical tables, which embrace ninety-four cases, and concludes with the following postscript:—

Since this dissertation was submitted to the Medical Faculty of the University of Pennsylvania, two papers on this subject have appeared; one by Mr. Letheby, in the 'London Medical Gazette' of December 24th, 1841, and an elaborate paper by Dr. Stark, in the 'Edinburgh Medical and Surgical Journal,' for January of the present year.

The facts observed by Mr. Letheby accord generally with my own. He found 'unquestionable evidence of kiesteine in forty-eight out of fifty cases between the second and ninth month of utero-gestation,' and was unable, like myself, to 'account for its absence in the two exceptions.' In seventeen non-pregnant women he found no indication of its presence; but detected it in the urine of ten suckling women, immediately after delivery, and onwards to periods between the second and sixth months, when it disappeared. The few microscopic results which he gives coincide also with my own.

Dr. Stark's paper is devoted to the signs of pregnancy, and among the rest to the state of the urine. He refers succinctly to his own observations relative to the kiesteinic pellicle, which he supposes to be derived from the suspended sediment; and he asserts that there exists a relative proportion between these and the earthy salts which enter into the composition of the urine. His paper derives its principal interest from his researches into the character of the sediment.

In the *natural sediment* of the urine of pregnancy, he was unable to detect the presence either of albumen or caseum by acids, alkalies, or alcohol, with the aid of heat; but when he added a certain quantity of milk to the urine, both these principles were discovered readily by the aid of acids, the other tests producing no effect: when milk was added in smaller quantities, however, it was *undiscoverable by any reagent.* Being unable to refer the sediment to any of the known deposits of the urine, though his investigations had immediate reference to its distinctive characters, he employed ether to effect a separation of the *animalized matter* which he thought it might contain, and he supposes that he succeeded by this means in detecting a substance entirely different from any heretofore known.

Failing to determine its constitution by chemical agents, he resorted to the microscope. He here found that this sedimentitious matter, whether examined while yet held in solution by the recent urine, or when it had assumed the form of a deposit, or when it had been disengaged by ether, was composed of distinct transparent or 'pellucid' globules, which when in their sedimentary condition bore a striking resemblance to the caseum globule of recent milk, but which when pellucid bore an equally strong resemblance to the serous or albuminous globule.

Dr. Stark now reduced the question to very narrow bounds, by inquiring as to the identity of this sedimentary matter with albumen, caseum, fibrine, and gelatine. He thinks that its minute structure and chemical properties sufficiently distinguish it from the two first;—from albumen, because it dissolves instead of coagulating upon the application of heat; from caseum, because it is soluble in nitric and sulphuric acids, which exert on this principle a very contrary action. From fibrine, it has necessarily a still greater difference. There remains *gelatine;* and compared with this, the distinction was less striking. The globules of both under the microscope, were similarly formed: both were soluble in the acids and alkalies, and by the aid of heat. The only distinctive particular seems to have been the action of tannin, which as is well known precipitates gelatine from its solution in water. Some of the natural sediments, dissolved in boiling water, and cooled to a blood heat, were treated with a decoction of galls: a flocculent precipitate was at once produced; but instead of gelatinizing upon cooling—*it was deposited;* and instead of becoming more solid and more easily separable, upon reboiling, it again underwent solution.

Upon these grounds he attains the conclusion, which I give without comment, 'that this substance is a matter *sui generis*, an elementary substance of principle, forming in some measure a connecting link between the albuminous and gelatinous elementary principles.' This substance he proposes to designate by the name of '*Gravidine.*'

It is unnecessary to say, that this discovery of a new organic principle, if confirmed by future investigation, will be a matter of great interest. I must confess, however, that the distinctive characteristics of the new substance do not seem to me very decidedly marked in the results announced by Dr. Stark; and such is the complex, and often deceptive nature of the investigations of physiological chemistry, that we have a right to wait for renewed experiments before admitting too implicitly the certainty of those he has described.

Dr. Stark considers that his experiments entirely subvert an opinion which has met with some favor regarding the theory of these appearances. Ever since the publication of Nauche's paper, the supposed presence of caseum in the urine of pregnancy has countenanced the idea entertained by Bird and others, already referred to, that the elements of the milk (not as Dr. Stark infers, the milk itself,) might probably exist in the urine:—as, however, the matter is neither milk nor caseum, a theory based upon their presence must necessarily fall. The conclusion may be a correct one so far as the chemical analysis is concerned; and yet the connection between the kiesteine pellicle and the mammary secretion may be adequately proved by other evidence. If even the Gravidine be regarded as a new organic principle, its properties are not so peculiar, nor its analogies with caseum so remote, as necessarily to imply the operation of different causes in the formation of the two.

I have already mentioned my conviction, founded on personal observations, that the unmodified caseum is not found in the urine; but the presence of the colostral appearances under the microscope, and the numerous phenomena which I have described as attending the presence of the kiesteine, leave me no room to doubt its *intimate connection with the condition of lactation.*

Cases of Double Hare-Lip—period of life most suitable for operating for this deformity. By Mr. Houston, of Dublin.

Mr. Houston has recently communicated to the Surgical Society of Ireland two cases of hare-lip operated on by him at an early age, and made some interesting observations on the most suitable time of life for operations. As the subject is one of great and evident interest, our readers will be gratified by perusing a report of the cases and the observations made by the distinguished surgeon who operated, and we therefore present the following analysis of the papers published in our Dublin cotemporary:—

Case I.—Mary Fox, two years and a half old, the fourth child of a robust healthy mother, was admitted into the City of Dublin Hospital, June, 1841, for double hare-lip, and double fissure of the palate. The first child of this woman had been born with the same deformity; the second and third were well formed at birth. The central piece of lip was large, a little inclined to the left side, and nearly the whole depth of the lip. The sides of the lateral fissures were continued, inferiorly, nearly into each corner of the mouth, leaving very little inferior red border; superiorly, that of the right side was continuous in the nose with the fissure in the palate: that of the left did not enter into the nostril, although it approached within a line of it. The central piece of bone under the nose was very prominent, and contained two deformed incisors, one of which projected forwards, the other to the right side over the fissure between the bones. The nose was broad and flat; and the whole exhibited, especially when the child laughed or cried, a great and ugly gap—deformities which were observed by the mother to be growing more hideous every day. The infant had never been able to suck; and the act of swallowing had been always slow and imperfect. It was, nevertheless, healthy and fat, and in every other respect well shaped. Mr. Houston then went on to say that, on the 7th of June, the operation was proceeded with, in the presence of his colleagues, Professors Benson, Hargrave, and Williams, and Mr. Orr; the child being rolled up in a sheet to keep its arms and legs quiet, and placed sitting on the knee of an assistant. The lips of the fissures were first freely detached from the bones by an incision, with a scalpel, through the mucous membrane. The outer lamina of the projecting bone, together with the protruding teeth, was then sliced off with nippers, so as to be rendered quite flat, and to afford a level support to the lip afterwards, but was not cut through in any part. Scissors were used to the lips, the angles being held by a tenaculum. The sides of the central piece were trimmed first, so as to leave it nearly the full breadth, and about two lines deep. The lateral borders were then excised, care being taken to cut well to the corners of the mouth, so as thereby to remove completely the rounded angles, which are always present in such cases, at the junction between the vertical fissure and the natural free red border. The needles used by Mr. Houston were two long, fine, woollen or darning needles, on which triangular points had been ground for the occasion. The lower, which was introduced first, brought the lateral pieces together with every exactitude, close above the free border; the upper one took in the central piece in its passage across from the one side to the other, and by its proximity to the nose, closed at the same time, completely, the fissure into the right nostril. The needles entered with much readiness, and, as one advantage resulting from their length, it was found unnecessary to pass a ligature on either until the fitting place and direction for both had been fully approved of. The cheeks being now well pushed forward by an assistant, the incised surfaces, including those of the central piece, fell accurately together, and a very moderate pressure with a ligature, applied in the figure of 8 shape, was found effectual in keeping them so.

The projecting ends of the needles were then nipped off, and their stumps covered with little rolls of adhesive plaster. The application of strips of plaster to support the cheek, and take off all drag from the needles, completed the operation. After the operation, the child fell asleep. During the succeeding days, there was slight feverishness, indicated by hot skin, restlessness, and loss of flesh; but the little patient continued throughout to take soft food, and nothing occurred to create any apprehension as to the completion of the union. In 72 hours the dressings and needles were removed; and, in order to render this operation the more easy, a light poultice had been laid over the whole, for about six hours previously. The union between the divided surfaces was found to be complete in every part, even so as to give a perfectly straight edge to the red border below; and superiorly, to close the left fissure a little way inside the nostril. The central piece lay on the same level with the lateral pieces, and had become united to them to its very point, from which down to the edge of the lip, there remained sufficient breadth of surface for firm adhesion of the lateral pieces at that place.

Simple dressing was applied; and the newly established union carefully protected against all lateral dragging of the cheek by the use of adhesive plaster. The child partook abundantly of food, and, in less than a fortnight, left the hospital—the incision, the needle marks, and even the wounded gums inside being all most satisfactorily healed. The disfiguring breadth of the nose was also much reduced; and the mother had the great gratification of observing that solids, and even fluids, were swallowed without the least regurgitation through the nose.

Case II., of which portraits were shown, was that of Maria Byrne, three months old, the first offspring of young and healthy parents, admitted into the City of Dublin Hospital, December, 1841. The fissure in the lip was in the left side and single, but so deep and wide that it entered the nostril at the top, and inferiorly ran to both angles of the mouth, leaving very little, free, red border to the lip. The palate bones were doubly cleft, and, in front, the right maxilla projected much over the left.

The operation was performed by Mr. Houston, assisted by his colleagues, and Dr. Beatty. As the central piece of bone projected so far that the lips, even in their natural state, could not be drawn over it, its outer layer, together with the pulps of the teeth, were removed as in the former case, making a flat, even surface for the support of the future lip. The remaining steps were completed with the same scissors and needles, as abeve recommended, and the employment of them was found so far to facilitate the execution of the operation that all was finished in less than five minutes. The lower needle passed in such a situation and direction, that its point, in crossing from one incision to the other, filled up the open mouths of the coronary artery, and thereby stopped all bleeding from it. The upper took its hold so near the nose as to close the fissure in the nostril and secure adhesion in that direction. The crossing of the ends of the figure of 8 ligature held the central parts in proper and equable apposition. The infant appeared to suffer but little from the operation—a slight feverishness, such as occurred in the former case, was the only disturbance which followed.

The needles were withdrawn at the expiration of sixty hours, and came away easily, having been loosened by suppuration. The adhesion was firm and accurately correct in every part. There was not a single point where freshly-cut surfaces had been brought into apposition, at which complete union had not taken place. On the very day on which the needles were removed, the infant was seized with acute bronchitis, which lasted for three days, to the imminent risk of its life; nevertheless, the union held its ground, and after the subsidence of the attack, a healing action came over the needle holes, when all got rapidly well.

Mr. Houston, in his observation on these cases, remarked that there was much difference of opinion regarding the most safe and befitting periods for undertaking such operations. Some think that the early months of life should not be selected, on account of the self-willedness of the infant—the softness of its tender flesh—its habitude of pressing the tongue against the lips as in the act of sucking—its want of power to bear a few days privation of food, and the unimportance to a young infant of the unsightliness of such a deformity:—such persons are still further of opinion, that at the expiration of three or four years, shame, and a feeling of its own infirmity would produce a desire on the part of the child to submit to operation; that, at this age, the tissues would have become sufficiently firm to bear needles or sutures; and that starvation for a few days would not so much endanger success. On the other hand, there are those who advocate an early operation on the following grounds:—That a grown-up child is more unmanageable than an infant; that its conduct is more influenced by fear of pain than by hopes of good from the operation; that the healing powers, so far from being more feeble, are more vigorous in the infant, than at a more advanced age; that the parts grow more naturally when early put-to-rights, than when permitted for a time to become misshapen; that the nose ceases to be so much spread out; that the fissure in the palate, if such exist, closes greatly if supported by a firm and perfect lip; that bad habits of speaking, such as nasal utterance, which, if once established, becomes irremediable, are prevented; and, lastly, that the feelings of parents are especially gratified by having such deformity repaired before their infant has gone abroad into the world. But, although the balance of advantages is thus evidently in favor of an early operation, we have, nevertheless, so high authority as that of Sir Astley Cooper in favor of a delay, until the child has reached the age of two years. He fears convulsions at an earlier age. Velpeau selects the first six months of life; or, if that be passed, prefers waiting until the tenth or fifteenth year. Dupuytren's favorite period was the third month. Mr. Houston observed, that from the successful issue in the case of Byrne, at the age of three months, and from others to which he adverted as having been equally fortunate in hands at the same age, he considers that to be the age at which, not only the greatest benefit may be done by operation, but that, also, at which there is as much exemption from fatality as at any other. The operation may, no donbt, be undertaken either earlier or later in life, if circumstances require it, and with more or less of benefit; but he regarded the third month as the most eligible period—particularly in cases where, as in the above, the infant cannot, from deficiency in the palate, take milk at the breast. Respectiug the comparative advantages of the scissors or bistoury in such cases, the authorities for both are nearly balanced.

Severinus and Louis among the ancients, with Liston among the moderns, recommend the knife: Desault, Dubois, and others, are advocates for the scissors, whilst Le Dran and B. Bell have recourse, indifferently, to one or other of these instruments.

The treatment to which the central piece in double hare-lip is to be subjected, must vary with its size and form. The plan adopted in the child of Fox—a modification of that recommended by M. Gensoul, as opposed to that of Louis and Heister, who operated only on one side at a time—succeeded perfectly, and with a smaller number of needles than are usually employed. A single needle was found sufficient to hold the central piece in its place; although Velpeau and others are in the habit of inserting, in addition to the large needles, several smaller ones, called insect needles, or even of pinning the central tubercle to the bone underneath for the sake of greater security. But Mr. Houston is of opinion that all such extra needles are not only unnecessary, but prejudicial, as being calculated to irritate and inflame the already too tender flesh. The projecting piece of maxillary bone was treated as above described, viz., by paring off the outer lamina, and removing the teeth, because the deformity which, in both cases, it presented was such as could not be remedied by Desault's method of pushing it into place by a graduated pressure continued for some days or weeks. On the subject of needles, Mr. Houston considered that the ordinary woollen needle possessed every requisite quality, more especially if pointed like a glover's needle. It may be had of any degree of fineness, and is of sufficient length after being deprived of its point and edge, to present a small polished surface to the flesh in which it is to lie. During the operation too, it is particularly manageable, as when once introduced there is little danger of its slipping out again, even though left untied, while the other steps of the operation are in progress; and that the presence of such is not a source of much irritation is shown by the length of time during which they lay comparatively harmlessly in the lip, viz.: seventy-two hours in the child of two and a half years, and sixty hours in that of three months—a duration which, by the way, may be perhaps as a general rule unnecessarily long, but which was permitted in the above cases for security sake, encouraged by the absence of all symptoms of inordinate irritation from their presence.

Mr. Houston concluded by observing, that after all such operations, where great nicety and perfection is aimed at, the strictest precautions should be taken to guard against every source of inordinate feverish excitement; as under fever, the lymph thrown out is not organized, and failure must necessarily be the consequence. He considered that, had the bronchitis and fever which came on, on the day of the removal of the needles in Byrne's case, showed itself a day earlier, the operation would have been unsuccessful; and it is under the influence of such conviction that he is always desirous, especially in hospital practice, and when the patient is fresh from the country, of operating soon after admission, in order to have the wounds healed before there be time for any derangement of health from change of air, or other sources of insalubrity.

The Principles and Practice of Modern Surgery. By Robert Druitt. From the Second London Edition. Illustrated with fifty wood Engravings. With Notes and Comments by Joshua B. Flint, M. D., M. M. S. S., &c. Philadelphia: Lea & Blanchard. 8vo. pp. 534.

The reputation of this admirable work, as one of the best,—if not *the* best,—compend of the principles and practice of modern surgery extant, is now so well-established, that it is unnecessary to describe at any length its claims on the most favorable notice of the profession.

Of the five parts into which the work is divided, the first two are more especially devoted to the principles, and the three others to the practice of surgery. The first part treats of the disturbances of the constitution at large, that may be produced by injury or disease of a part; beginning with the simple faintness or collapse that follows a blow, and proceeding to the varieties of fever and tetanus. The second part describes what may be called the elements of local disease, or those morbid changes of structure or function which are produced either immediately by external causes, or secondarily through some deviation from health. The third part treats of the various kinds of injuries, beginning with the simplest mechanical injuries, and proceeding to the effects of chemical agents and animal poisons. The fourth part considers, in order, the various tissues, organs, and regions of the body, and describes the various accidents and surgical diseases to which they are liable. The fifth, and concluding part, is occupied with descriptions of such operations as were not included in the former parts.

The engravings which illustrate the text, are executed with much accuracy and beauty, and add greatly to the value of the work. Dr. Flint has discharged his editorial duties with great judgment and ability. We know no other work which presents in such condensed and intelligible form, so vast an amount of surgical information.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, July 23, 1842.

We are very much gratified in finding that the suggestions of our esteemed correspondent, whose article respecting the necessity of having our emigrant vessels provided with physicians, we inserted last week, have received such general and warm approval. The subject is one which has occupied much of our own attention, and we have been endeavoring to adopt such preliminary measures as may be best calculated to promote the contemplated object. From our own knowledge, we can safely say that if the matter be properly agitated, there can be little difficulty in procuring a legislative enactment, by which the owners of all ships employed in the conveyance of passengers across the Atlantic, will be obliged to secure the services on board of properly qualified medical men.

That the presence of a physician on board each of our emigrant vessels, is absolutely necessary, requires not a word of argument. And it is not a little strange that the not unfrequent occurrence of lamentable proofs of the culpable negligence of ship owners, in sending hundreds of their fellow-beings across the deep, without any means of obtaining medical aid, or medicine, has not ere this led to some appropriate and decisive measures to correct the evil. It is, however, never too late to begin a good work, and now that this matter has been fairly taken up by so many of our brethren, we trust that a speedy and effectual preventive will be interposed against the recurrence of the deplorable scenes to which we have referred.

The reputable and desirable employment which would be afforded to a large number of our young practitioners, were such a law passed as that for which we now contend, is alone sufficient to enlist the sympathies of the profession. We trust that our readers will give this subject all the consideration which they may deem its interest and importance demand, and that when their co-operation is more particularly demanded, they will, *en masse*, be found prepared to render it with hearty and effective zeal.

☞ We have heard with great pleasure that our talented fellow-citizen Dr. David M. Reese has been appointed Professor of the Institutes of Medicine and Medical Jurisprudence in that highly respectable institution—the Washington University of Baltimore. Our friend still retains the occupancy of the Chair of Medicine in the Castleton Medical College. The Faculty of the Washington University, we may remark, has been completely re-organized, and the classes will open next session under the most favorable auspices, the Professors being all men of acknowledged reputation, and high attainments. Connected with the University is a large and well-arranged Hospital, and from the excellent manner in which the important department of clinical instruction will be conducted, we can confidently anticipate the enjoyment of singular advantages by the students who may resort to the institution. Dr. Reese is, it is well known, a warm friend of an improved plan of medical education, and we trust that in the new and prominent sphere of usefulness to which he has now been called, he will endeavor to advance by all proper and energetic means, the interests of the good cause.

THE MEDICO-CHIRURGICAL REPORTER.

[WRITTEN FOR THE LANCET.]

An Account of the Bilious Fever as it prevailed in Newbern, N. C., in the Fall of 1841.

BY GEO. H. TAYLOR, M. D.

It is proper to state in the commencement, that the town of Newberu contains about four thousand inhabitants, and is situated at the junction of two rivers, the Neuse and Trent. A little to the southwest of the town lies a marsh several miles in length, and about a quarter of a mile in breadth. A short distance from the northwest part of the town are a number of large ponds, which contain a considerable amount of water throughout the year. There are also a number of low places within the limits of the town in which water is permitted to remain a great part of the year, the quantity being more considerable after heavy rains.

During the summer months there were but few cases of fever. Early in September, however, a large quantity of rain having previously fallen, a number of cases occurred simultaneously in various parts of the town. There was no part of the town that escaped entirely, but those parts most adjacent to the marsh and ponds referred to, were visited in a peculiar manner, scarcely a family in such quarters escaping, and in many cases every member of such families being affected. There was a marked difference in the disease as it appeared in the vicinity of the marsh and in the vicinity of the ponds; those cases in the vicinity of the former yielding promptly to remedies, scarcely a case proving fatal; while those in the vicinity of the latter were much more obstinate, resisting all remedies, and many of the cases proving fatal. The general form of the disease was that of the bilious intermittent and remittent fever, commencing first with languor, uneasy and painful sensations, followed by coldness of the extremities, sometimes with shivering and cold sensations running along the spinal column. These symptoms would continue from half an hour to three hours, and were followed by heated skin, thirst, flushed countenance, and the usual febrile symptoms, which would frequently continue for twenty-four hours, when another chill would supervene. In the generality of cases, however, on the day following the appearance of the first symptoms, there would only be a slight chilliness of the extremities, of brief duration, followed by fever; and the day succeeding the chill, the patient would experience what is called a shaking ague. And in this form the disease in many cases continued till it terminated in death or convalescence. Some patients who were not troubled with severe agues, would experience as many as half a dozen chills in the course of a day. Occasionally the disease assumed the purely tertian type, the ague returning regularly every forty-eight hours, lasting from one to three hours, followed by fever which continued generally from five to ten hours, sometimes abating after a copious sweat, and sometimes continuing during the whole period from one ague to another. In some cases the paroxysms were at first very slight, so as not to confine the patient to bed; but each successive attack would become more violent, and in a few cases the patient died in the third or fourth ague, no reaction taking place. I was requested to prescribe for an adult female who had for several days been suffering with chills and fevers, but who at the time I saw her, in the morning, appeared quite well and was attending to her household affairs. I prescribed, as requested, and at about two o'clock in the afternoon was called in great haste to see her, as she appeared to be in a dying condition. I found her insensible, breathing heavily, with the eyes fixed and pupils somewhat dilated. The surface of the body generally was moist and of a natural temperature, excepting the extremities, which were cool. The pulse was frequent and feeble. Her ague had come on at the usual time, and feeling more indisposed than on former occasions she had retired to bed, and in about twenty minutes from the accession of the paroxysm she became speechless, and had since remained in the condition in which I found her. Directing a large sinapism to be applied to the epigastrium, and others to the ankles, I awaited for an half hour in expectation that they would rouse her, but finding she continued in the same state, notwithstanding the mustard had sufficiently excited the skin, I commenced stimulating her with ammonia, under the influence of which she was soon roused so as to converse. So soon, however, as the effects of the ammonia were expended, she would relapse into her former state. Finding her pulse at times to grow very feeble, I continued the ammonia at internals of an half hour, during the afternoon and evening, at which time I directed a sinapism to the back of the neck and left her. She remained in this state of stupor, to some extent, for several days, after which it gradually wore off, and she had no return of the agues. Quite a number of similar cases occurred about the same time.

The appearance of the tongue in the commencement of an attack was generally natural, but as the disease progressed it became covered with a whitish coat which changed gradually to a yellowish or brownish hue, and in a few cases, where the disease continued for a great length of time, it became entirely black, the tongue being at the same time dry and cracked with a longitudinal and a number of horizontal fissures. In almost every case the patients complained of pain in some part of the body, often in the head, shoulders, back and legs; frequently of pain and a sense of weight about the epigastrium and right hypochondrium, and in many cases of a permanent pain in the region of the spleen. The fever following the cold stage was in many cases very high, attended with hot and dry skin, quick and full pulse, and often delirium. There was generally a manifest abatement or aggravation of the symptoms about the seventh day; in some cases the patient would die at this period; in others there would be a remarkable transition from a state indicating approaching death to one of striking amendment; and in others, again, the patient would sink into a stupor, with a frequent and feeble pulse, and a low muttering delirium, in which state he would remain several days, and from which few ever recovered, death then terminating the scene. In the cases which proved fatal this was the most common termination. Quite a number of cases were attended with a troublesome cough. The primæ viæ were frequently found in a constipated state. In a few cases the surface of the body was of a bright yellow hue. In a majority of cases there was great irritability of the stomach, and violent vomiting often formed a very unpleasant and obstinate symptom. The fluid ejected was of a greenish or yellowish cast.

In the cold stage of the disease little was done, as a general rule, except placing the patient in bed, applying hot bricks or bottles of hot water to the extremities, and administering some warm mild tea; though where the cold stage was considerably protracted, I was in the habit of exhibiting a full dose of laudanum with benefit, and if necessary, repeating it. In the hot stage, however, more was required. Where it was not contra-indicated by gastric irritability, I have in this stage exhibited the aqueous solution of tartarized antimony, in small doses, frequently repeated, with marked advantage, and in a few cases have, with this remedy and the assistance of a mercurial cathartic, entirely cut short the disease. In many cases, however, the antimouy could not be employed, and the acetate of ammonia was used in its stead with much relief to the patient, the use of it being followed, after a few doses, with a copious perspiration and an abatement of all the symptoms. So soon as the fever sufficiently subsides, a remedy not to be forgotten is the sub-murias hydrargyri, in a full dose, alone or in combination with rhubarb, the latter of which I prefer and generally employ. Indeed my first aim on visiting a patient was to clear the primæ viæ with rhubarb and calomel, for the catharsis induced by this combination is not attended with that debility which follows, when the calomel is used alone, in a dose sufficiently large to move the first passages, or when it is followed by castor oil or the sulphate of magnesia.

The next part of the treatment is that which is designed to prevent a return of the paroxysm. Keeping in mind the fact that the fever generally continued from one ague to another, it is manifest that the sulphate of quinine cannot be employed with advantage in such cases, to fulfil the end under consideration. Even where a total subsidence of the fever had taken place, I have frequently been disappointed when depending on the free use of the quinine to prevent a return of the chills, though in some cases it has fulfilled that indication. Taking the hint from Good, after previous purgation, I employed a full dose of the pulv. ipecac. comp., about two hours before the period for the return of the paroxysm, with entire success, no ague coming on. The same remedy I repeated in twenty or thirty cases with a like result, in nearly every case in which the paroxysms observed any uniformity in the time of their approach. If this remedy failed on the first trial, as it did in a few instances, I do not recollect a case in which it failed after the second trial. In quite a large number of cases, the Dover's powder was the only remedy I employed, after purgation, to prevent a recurrence of the agues, and I am not aware but those cases recovered as well and as speedily as those in which the quinine was employed. I would not, however, discard the use of quinine, but consider it a valuable auxiliary, to be used freely during the intermission, but not to be entirely relied on to prevent a return of the ague, which, considering the great danger often attending that stage, is a paramount object with the physician.

In many cases during the ague, and even after reaction had taken place, the patient complained of a constant, painful, and heavy sensation about the region of the epigastrium. In these cases I have prescribed, at bed time, about eight grains each of calomel and Dover's powder, and in the morning discovered that those symptoms had entirely disappeared. In directing Dover's powder in this disease, I think it advisable always to add to it a small quantity of calomel. In about eight cases out of seventy-five, there was a perceptible enlargement of the spleen. I have no means of ascertaining the number of deaths occasioned by the disease during the late fall, but can only say that it was larger than had occurred from the same cause in any season within the recollection of the oldest inhabitants.

The effluvium arising from the decomposition of vegetable matter, is undoubtedly the principal remote cause of the disease with which the inhabitants are afflicted to a greater or less extent almost every fall. The cases are invariably more numerous and fatal in the neighborhood of those situations where the materials for the generation of this effluvium are most abundant. Considering the unusual and violent form assumed by the disease during the late fall, there is reason to fear, that unless the cause of disease be greatly diminished, our town may be visited at some subsequent autumn, by that annual scourge of more southern towns, the Yellow Fever.

Newbern, N. C., March, 1842.

Case of Gun-shot Wound of the Face,

With loss of a greater proportion of the Tongue, and extensive lesion of the bony structure, successfully treated; together with an account of interesting nervous phenomena, resulting from the injury.

BY J. F. PEEBLES, M. D., PETERSBURG, VA.

In the month of August, 1840, Washington Perkins, a middle-aged man of robust constitution, but intemperate in his habits, induced by a fit of jealousy to attempt self-destruction, placed the muzzle of a fowling-piece, charged with duck-shot, immediately below and in front of the angle of his right jaw, and discharged the gun with his foot.

I saw him a few minutes after the accident; the hæmorrhage was frightful, though he was composed and sitting up in bed. Upon examination, I found an entire breach in the inferior maxillary bone at the point where the shot had been received of more than an inch in length, involving the loss of the two lower molar teeth. Passing obliquely upwards through the mouth, the tongue was torn across in the line of the shot, all the free portion of it with the attaching frænum, completely severed and thrown forward between the front teeth. The charge passed out through the antrum about three quarters of an inch below the eye, carrying with it also the two cuspidati and their alveolar processes.

In addition to the injury of the inferior maxillary bone already named, there was a transverse fracture at the symphysis. Owing to the nature and peculiar situation of the injury, the means of arresting the profuse hæmorrhage were confined principally to rest in the recumbent posture, and cold applications to the head, face and neck. But the quantity of blood which had found its way into the stomach, and still continued to trickle down the throat, despite our efforts to prevent it, very much embarrassed and impeded their effects by the frequent retchings it induced. As soon as fainting came on, however, firm coagula formed in the cavity of the mouth and the orifices of the wounds, and the hæmorrhage entirely ceased. In this state he was left for the night, with directions for the diligent continuance of rest and the cold applications to the head and face.

During the night, from the frequent gratification of his intense thirst, the coagula were removed, and the bleeding partially returned, but a bit of ice in the mouth controlled it until the following morning, when all oozing was promptly suppressed by pledgets of lint soaked in a solution of kreosote applied on the bleeding surface.

His face and wounds now presented the following appearances. His mouth, particularly the lower portion of it, was drawn to the left side; he complained of feeling a notch in the glass from which he drank, owing to loss of sensation in the right portion of the lower lip, phenomena which indicated lesion in the motor and sensitive nerves which supply the lower portion of the face. Over the inferior maxillary bone where the charge had entered there was a circular but jagged wound of over an inch in circumference, either way, extending up on the neck. On introducing the finger the fractured ends of the inferior maxillary bone were found to present a remarkable peculiarity. Instead of being shattered, and split or splintered as might have been expected from the violence of the accident and the nature of their structure, the ends of the bone were found presenting regular and transverse surfaces, as if only that plug of bone had been clearly removed which had received the violent charge, without material injury to the adjoining portion. The osseous system of this man had always exhibited evidence of remarkable fragility. He had suffered fracture of the thighs five different times, and as it is usual in individuals suffering from fragilitas ossium, the bones had in each instance united, with but little inconvenience, and with remarkable facility. Was not the regularity and favorable nature of the fracture to be attributed to this condition of the osseous system, which, doubtless, was general?

The end of the tongue was retracted and swollen, so as considerably to impede deglutition. The left antrum was exposed; whilst the external wound above presented the form of a triangular incision, with a flap perfectly preserved and thrown back. This was now brought down, the parts adjusting themselves perfectly together, and confined with adhesive plaster.

The portion of inferior maxillary bone between the symphysis and the breach at the angle had fallen inwards, protruding the teeth longitudinally into the mouth, and was so loose and detached as to occasion some thoughts of the propriety of its immediate removal. It was however erected into its proper position, and confined as securely as the circumstances would permit, and for the few succeeding days the patient remained tolerably comfortable. After this time for the succeeding ten days alarming hæmorrhage from time to time continued to recur, but by the diligent continuance of cold applications to the head and face, together with the topical application of kreosote to the bleeding surface of the tongue and cheeks, it was checked; when he ceased to suffer further annoyance or danger from this score. At the end of the second week the external wound over the antrum had healed by the first intention, and although the antrum still remained exposed, the wound in the superior maxillary bone from this time gave no further inconvenience. The tongue was also well, and healthy granulations were shooting up in the wound in the right cheek. The detached piece of inferior maxillary bone became now the most embarrassing feature of the case. As it was not fastened at either end, it was impossible, such was the state of the external wound, now to adopt any means by which it could steadily be held in its proper place a sufficient length of time for union to occur; and for upwards of a month the prospect of its removal, either by necrosis or excision, was improbable. About the middle of the second month, however, it had united at the symphysis, and at once the health of the patient, which had been kept feeble by the exhausting discharge and irritation about the mouth, rapidly improved.

From this time the contraction of the muscles gradually approximated the ends of the inferior maxillary bones, and at the termination of the fourth or fifth month they became united, and the cure was complete.

The following is the condition of the man's face at this time. Considering the great loss of bone, its general contour is but little altered. The inferior maxillary bone, though somewhat shortened, and with the exception of a slight protrusion at the point where the union at the symphysis occurred, is perfect and sufficiently strong for the purposes of mastication, The remaining portion of the tongue, doubtless from the long inactivity of its muscles, is atrophied to a mere membrane. It has well developed papillæ, however, and the taste still remains unimpaired. It affords no assistance in speech, or in mastication, (the fingers being used in the latter operation tu keep the material between the teeth,) but remains motionless on the floor of the mouth. The deglutition is perfect. The membrane covering the exposed antrum is healthy. The mouth is still partially drawn to the left side, and the muscles of the lower part of the right side of the face take no part in the expression of the countenance. During laughter they are motionless, grotesquely distorting the face. But as this state of things is confined to the lower part of the face, the eyelids and muscles on the side of the nose remaining unaffected, it is probable that the lesion is confined to the lowest branch of the portio dura on the face. A portion of the motor branch of the fifth pair is also complicated in the lesion, as the muscles of the right cheek are atrophied, and flap, from a want of consent between their action and the motions of the jaw, in such a manner between the teeth as to prevent mastication on that side. But the sensation has returned in the lip. This occurrence soon after union had begun at the fracture near the symphysis, proving consequently, that the paralysis which had occasioned the loss of sensation was owing only to the pressure exerted by the displacement of bone, on the branch of the third division of the fifth pair of nerves, which emerges from the anterior mental foramen to be distributed on the lip. This man has returned to his old habits, and is frequently seen intoxicated about the streets, yet the bones of the face and the mucous membrane of the mouth continue perfectly healthy. Indeed, the whole history of the case manifests a hardihood, and a strong disposition to the healthy reparation of injury in the osseous system which, I think, is quite remarkable.—*Amer. Jour. Med. Sci.*

Cases of Strangulated Hernia, with Remarks.

BY J. MASON WARREN, M. D.

Case 1.—*Strangulated femoral hernia—Omentum forming a cyst containing the intestine—Large abscess within the abdomen.*

The subject of this case was a laborer, 40 years old. The hernia first made its appearance five years ago, and was discovered filling the scrotum after a hard days' work. The patient was able to return it himself with some little difficulty; he made no application, however, and wore no truss, and when the intestine was occasionally protruded and a little pinched, by quiet and abstinence he succeeded in replacing it without medical assistance. Two years since the hernia suddenly disappeared, and did not manifest itself again until the present time.

I was requested to see him by his physician, Dr. Brown, under the following circumstances:—Forty-eight hours before, while raising a heavy load, the hernia was again suddenly forced out, and was immediately followed by severe pain in the abdomen. He made repeated efforts to reduce it, and the following day even attempted to resume his work, but fainted from pain and was taken home. He did not see his physician until the following morning, not apparently being aware of the dangerous nature of the disease. He was immediately bled, ice was applied to the hernial tumor, and all the ordinary means for the taxis resorted to. In the afternoon, the symptoms becoming aggravated, I was requested by Dr. Brown to perform the operation.

The tumor at this time was about the size of an orange, very tense and painful to the touch, and the scrotum, from the long-continued efforts of the patient by severe rubbing for its reduction, had become considerably inflamed. He complained of a severe dragging and almost insupportable pain in the abdomen.

I was assisted in the operation by Dr. Warren, Sen., Dr. Brown, and Mr. B. Brown.

On opening the hernial sac a large mass of omentum presented, very red and swollen; this had an elastic feeling, as if it surrounded a mass of intestine.

The stricture, which was formed by the external abdominal ring, was extremely close, and it was with the utmost difficulty I was able to insinuate a director under its edge and divide its fibres. This being accomplished, the strangulated parts were a little loosened so as to allow me, after some examination, to insert the little finger into an aperture formed by the folding of the omentum, and discovered a knuckle of the intestine which was thus almost completely encysted. By a slight pressure this was easily returned into the abdomen. The reduction of the omentum was however a matter of more difficulty, and it was only after a further dilatation of the stricture and by considerable management, that it was ultimately reduced. The omentum, though much swollen, was not at all indurated, and was otherwise quite healthy. He expressed himself immediately relieved on the completion of the operation.

The following morning he was free from pain in the bowels, which acted well after a dose of castor oil. There was a retention of urine, which required the use of the catheter. His pulse was a little accelerated.

On the third day I perceived a slight redness in the groin, and he complained of a deep-seated pain in the left iliac region. The pulse was quick, countenance anxious, and the tongue considerably coated. On the following day the redness had extended itself nearly half down the thigh and over a part of the abdomen of the same side. There was great pain at this point on pressure, but the abdomen generally was not over sensible, and presented no appearance of extended peritoneal inflammation. His bowels were freely evacuated by means of castor oil, and leeches were applied to the seat of pain, followed by a large poultice to promote the flow of blood and increase the capillary circulation. In the course of a few days an indistinct fluctuation could be distinguished, deep in the iliac region, which, finally, ten days after the operation, began to discharge itself through the external abdominal ring at the upper part of the wound made in the operation. So far as could be ascertained, about a quart of pus was contained in the abscess. The parietes gradually contracted, and the patient recovered without further difficulty.

The chief points of interest in this case are, 1st. The disappearance of a large hernial tumor, which for three years had been unrestrained by a truss, and its sudden return and immediate strangulation by the external ring, two years afterwards. 2d. The encysted state of the intestine, which was so completely concealed on the first opening of the sac, that it could not be exposed; and it was only after the protruded parts had been relieved by a free division of the stricture, that the omentum could be unfolded, and the intestine discovered through a small aperture at its posterior portion.

The most interesting feature of the case was the formation of the large abscess within the abdomen. No appearances were presented on the evacuation of this abscess through the abdominal ring, to justify the idea that any portion of the omentum had become gangrenous; the pus was well formed, and in all probability must have been derived from a suppuration of the prolapsed omentum, and which had been inflamed partly by the strangulation it had been subjected to, and partly from the long-continued and violent efforts of the patient to force it back into the abdomen.

Case II.—*Scrotal Hernia—Division of the stricture and reduction of the hernia without opening the sac.*

This patient, a sailor, 30 years old, was admitted into the Massachusetts General Hospital under the care of Dr. Warren, Sen., on Sunday, the 10th of April. His history was as follows:—He had been subject to a hernia in the right inguinal region for the last fifteen months, which had been partially kept up by means of a hernial bandage. Yesterday, while coming to Boston in the rail-road cars, the hernia suddenly made its escape from under the pad, which was immediately followed by severe pain. He made repeated efforts during the afternoon and the following night to return it into the abdomen, but these attempts seemed only to increase his sufferings. The next day he was brought to the hospital by Dr. Channing, and was seen by Dr. Warren.

The tumor, about the size of two fists, was quite tense, very painful to the touch, and the surface of the skin over its neck in the inguinal region, was much inflamed and excoriated, from the pressure of a powerful truss with a wooden pad which he had lately employed. He stated that there had been a slight evacuation from the bowels just after the hernia had become incarcerated. He was directed to be freely bled, which was to be followed by a warm bath; cold applications to be then applied to the tumor, and an enema administered.

In the afternoon, in spite of these remedies, the symptoms all became aggravated; the pain in the abdomen was intense, and after all reasonable efforts had been made to effect a reduction, Dr. Warren determined on the operation, and requested the attendance of his colleagues Dr. Hayward and Dr. Townsend, who agreed with him in its propriety.

An incision two inches long was made over the external abdominal ring, dividing the skin and subcutaneous tissues, and exposing the fascia propria. A small opening was now made in the fascia just below the ring, so as to allow a director to be carried perpendicularly to the body, between this and the hernial sac, and a slight incision of the ring allowed the director to be carried under the tendon, which was then divided. On the division of the stricture the reduction of the hernia was effected without difficulty, and the patient immediately expressed himself relieved. The wound was brought together by three points of suture. Three hours after the operation, the patient had a spontaneous evacuation from the bowels.

On the day following the operation, it was quite striking to notice the difference in the appearance of this patient from that usually presented after an operation for strangulated hernia. His countenance was animated, pulse slow, skin moist, and a decided expression of relief was visible. His subsequent symptoms scarcely require to be noticed. The wound healed by the first intention, and he was able to rise from his bed on the fourth day, keeping his hand over the compress that covered the abdominal ring. The T bandage had been omitted as useless and even pernicious. After fourteen days from the operation his truss was applied, preparatory to walking about freely, and on the 16th he was well enough to require no further treatment.

A subcutaneous incision of the ring had been thought of by Dr. Warren, but the ring could not be felt through the thickened integuments. The operation actually performed was however easier, safer and less prolonged than a subcutaneous operation. In fact, it is difficult to see the peculiar advantage in applying the subcutaneous incision to strangulated hernia, that is, provided the operation be truly subcutaneous; for the complicated operation described by the celebrated orthopœdist, Guerin, in which he made two incisions, one over the upper, and another over the lower ring, and in which the air appears to have been freely admitted, hardly seems to have the advantages to be expected from this method. If then a real subcutaneous incision were attempted, it would be found very difficult to divide the superficial fascia covering the abdominal ring, without endangering a wound of the sac and perforation of the intestine.

The mode adopted in the subject of this case, and which originated with Petit, is undoubtedly the best that can be applied to strangulated hernia, and we do not see why it should not always be attempted. If the hernia be so large as to cover the ring, it may be difficult to expose the latter so as to divide it, but this can generally be accomplished.

If on the division of the ring we should find it impossible to reduce the hernia on account of the existence of the stricture at the neck of the sac, we have only to extend our incision, open the sac, and proceed after the ordinary way. This case derives additional importance from the startling doctrine that has lately been advanced by Malgaine, that the stricture is never caused, or at least that this has never been proved to his satisfaction, by the tendinous openings of the abdomen, but is almost always found in an induration of the neck of the sac, caused by the long-continued pressure of a bandage. It may be offered, together with others of a similar character performed by surgeons abroad, whose accuracy cannot be questioned, to show that the strangulation may occasionally exist at the abdominal ring.

To these cases I may add one of some interest, showing the powerful influence of fear in effecting the reduction of an apparently irreducible hernia, which had resisted all the ordinary means of treatment.

I was requested by a medical friend to perform the operation for a patient laboring under the most urgent and distressing symptoms which I have ever witnessed in this disease. The hernia was an old one, and had first become strangulated two days before. In addition to severe pain in the abdomen, the patient had an almost continued vomiting, with violent spasmodic action of the whole body, and more particularly of the lower extremities. Before I saw him he had been thoroughly bled to syncope, ice had been applied to the tumor, and a tobacco enema had been administered, but all without effect, and the only hopes of saving life appeared to be in the speedy resort to surgical means. All the preparations for the operation being made, as I was just on the point of commencing the incision, his courage gave way, and he obstinately determined not to submit to it.

I then stated to him the great danger of any delay, and the probability of a very speedy fatal termination, if the intestine was allowed to remain longer in its present situation. The danger of death before his eyes seemed to have a powerful effect on him, and while I was speaking the spasmodic action of the body relaxed, and the patient became deadly pale. Having my hand on the tumor, I felt a slight relaxation in its contents. I immediately seized the intestine within the abdomen through the abdominal parietes with one hand, and making with it a strong extension, used a slight compression with the other on the sac, and the hernia slipped back into the abdomen.

Had it not been for the occurrence of the accidental circumstance mentioned above, we have every reason to believe, that the mere intensity of suffering must have shortly terminated his existence.—*New England Quar. Jour.*

ITEMS AND INTELLIGENCE.

Medical Education.

TO THE EDITOR OF THE LANCET.

Mr. Editor:—

I rejoice at the noble stand you have taken on the great subject of medical education. And I can assure you that your course is warmly approved by all intelligent and liberal-minded men of my acquaintance both in the profession and out of it. I suppose you are aware that at the last meeting of the Medical Society of the State of New York, the question of the propriety of adopting measures for the extension of the course of college education, was brought up on resolutions passed at several of the county medical societies. A committee of the State Society reported on these papers, and a resolution was passed recommendatory of a more extended preliminary education of medical students. This shows you, sir, that the work of reform in which you are engaged is not to be regarded as a hopeless one by any means. I trust that, despite of all opposition, you will persevere in your laudable efforts for the promotion of this great cause. I know you will be sustained, but like all who place themselves in the fore-front of the battle against prejudice and the interested enemies of reform, you must expect to meet with opposition. I am yours truly,

Alpha.

New York, July 19th, 1842.

Suicides by Laudanum.

TO THE EDITOR OF THE LANCET.

Mr. Editor:—

The management of a case in a neighboring city as recently published, revives in my mind a practice, which if not original has the merit of being available and singularly efficacious. The agent mainly concerned in effecting the resuscitation alluded to, was the cold stream, made to fall upon the head from the height of about two feet. The practice is judicious, but it is attended with the inconvenience of drenching the dress and bedclothes, and with the consequent danger of the secondary sedative effects from an excessive reduction of temperature.

About a year ago, a woman in Broome street swallowed an ounce of laudanum, which she had just purchased of an apothecary. I found her, an hour and an half afterwards, supine on the bed and in a settled stupor, with a languid circulation, yet skin warm and tinged with a faintish glow. I took a common enema syringe, drew in a tablespoonful of water, worked the piston gently a few times, stood back three to four feet and played away, forcing the fine vapor against her face and shoulders for a minute, when the patient began to show manifest signs of uneasiness. I persevered in this way with short intermissions, and ere long the woman was so far herself again that she could hear and understand, and be made to swallow. An ipecac draught was now administered. Sulphate of zinc (sulphate of copper is better) I have not found for myself to fulfil the expectations so commonly ascribed to it. I still plied the vapor douche as often as a tendency to relapse appeared, until vomiting came on. The patient was next put upon her feet and conducted about the room between two women, and in one hour from my arrival she was in a safe and comfortable way. When the skin is cooled down, the syringe must be used more cautiously and for shorter periods. Other therapeutical resorts, whether conjunctive or vicarious, having each something to recommend it, are shouting in the ears, rubbing and shaking the body, whipping the skin with slender twigs, or blistering it with a spatula dipped in boiling water, the stomach-tube, stimulants combined with emetics, and in a very advanced stage artificial inflation of the lungs.

I was led to this practice in the present case, from my success some years since in this city with a patient from the lowlands of Georgia, who had remittent fever of a malignant type, and whom, as I believe, I rescued at the critical hour from confirmed coma, by persevering in this way for a good part of a night. Be assured that if any means will arouse the patient in coma incipient or advanced, this is the thing. For any similar purpose, ice, local stimulation, &c. are not to be named with it.

Yours,
A. Calkins, M. D.
New York, June 18th, 1842.

☞ The following card appeared in several of the New York city newspapers, and for obvious reasons is inserted here :—

To the Medical Public.

The duty of repelling unjustifiable assaults on my professional character, is one from which I would fain shrink. But as there have recently been exhibited evidences of a concerted movement on the part of the Faculty of the Stuyvesant Institute School in this city, to crush the humble writer of this notice, I am led to appear thus prominently before my brethren. Among the accusations preferred against me by the body to whom I have just referred, is the charge that I have not been regularly educated as a medical man, and that I am an impostor. In order to refute this charge, I submit the following :—

> 'I hereby state that I have inspected the credentials of James Alexander Houston, and certify that he has regularly studied medicine and surgery at the University of Glasgow. (Signed)
>
> Henry D. Bulkley, M. D.,
> Recording Secretary of the Medical Society
> of the City and County of New York.
> *July 19th, 1842.*'

I take the liberty to add that I have lodged my credentials in the hands of the Censors of the State Medical Society, and await their examination. Dr. Bulkley's certificate merely shows that the statements of the Stuyvesant Faculty are incorrect, and in due time I hope to be recognized as a legal practitioner of the State Medical Society.

James A. Houston.
7 Tenth street, July 19th, 1842.

Medical Ethics.

TO THE EDITOR OF THE LANCET.

Sir :—

As a subscriber to your valuable *Lancet*, and an admirer of the uncompromising honesty with which therein you encourage merit and expose wrong, I send you the following statement of facts, with the idea that you may think their publication in your periodical may serve the cause you so zealously advocate, of promoting the respectability of your profession, by exhibiting and urging the necessity for, and the propriety of, a reform, not alone of its 'system of education,' but also that of indulging with impunity the quackery of some of the 'worse practices' of others of its members. For many of them a 'castigation is in store,' but I know your valuable space cannot be wasted in 'running a muck.'

A married physician in the wane of life, of imposing exterior and grave deportment, having two establishments—home and office—with assistants and extensive connections, was professionally employed in an ordinary and casual illness by a young widow. By insinuating manners he made himself agreeable, the result of which was an intrigue. The natural consequences being indicated, he proposed and administered a fatal dose ; he witnessed the effect and secured the embryo—which, 'tis said, he still retains, having persuaded his people that he procured it from a patient on Long Island. This 'liason' he continued during many months, and monthly exhibited the baneful dose to prevent a repetition of the natural effects. And during all this time of indulgence he not alone did not in any way incur the smallest cost, but borrowed of the victim of his villainy fifty dollars ; and now when she asks it back, he pleads the set-off of a bill for medical attendance ; and when she speaks of his misconduct, he—secure, as he thinks, of impunity from her helpless condition—sets her at defiance.

Being consulted as to the course to be pursued, I became acquainted with the parties and facts, and communicate this much to you with the feeling and object before named.

Yours, respectfully,
Omicron.
New York, June 20th, 1842.

Books, &c. Received.

The Mineral Springs of Western Virginia; with remarks on their use, and the Diseases to which they are applicable. By William Burke. New York: Wiley & Putnam. 1842. 12mo. pp. 391. [Notice in our next.]

To Correspondents.

Dr. A. E. Hosack's valuable and interesting paper will appear as soon as the engravings inteuded to illustrate the cases, will be received from the engraver.

We have received Dr. Ward's esteemed communication. It will appear in our next.

To the many friends and subscribers who have honored and cheered us by their approbation of our sentiments with regard to medical education, we return our thanks. In due time we will make use of their communications.

The 'Phenomenon' is not worth the powder.

We have read the able article on the 'Doctrine of Temperaments,' and intend transferring some portions of it to our pages.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending July 16, 1842.

35 Men, 42 Women, 59 Boys, 42 Girls. Total, 175.

DISEASES.

Apoplexy	3	Intemperance	0
Asthma	0	Inflammation	1
Asphyxia	2	Of liver	2
Abscess	0	Of bladder	0
Aneurism	0	Of brain	7
Bleeding	0	Of stomach	2
Bleeding from stomach	1	Of chest	0
Bleeding from lungs	0	Of lungs	2
Burned or scalded	1	Of bowels	3
Casualties	1	Of heart	1
Cholera infantum	26	Of kidneys	0
Cholera morbus	0	Insanity	0
Constipation	1	Jaundice	0
Consumption	34	Killed or murdered	1
Convulsions	12	Lues Venera	1
Croup or hives	1	Mortification	1
Debility	4	Malformation	0
Delirium tremens	1	Marasmus	12
Diabetes	0	Measles	0
Diarrhœa	4	Old age	2
Death from poison	0	Organic disease of heart	0
Dropsy	3	Palsy	0
Dropsy in head	7	Rupture	5
Dropsy in the chest	0	Rheumatism	0
Drowned	1	Spinal disease	1
Dysentery	6	Suicide	0
Erysipelas	0	Sprue	2
Epilepsy	1	Small-pox	3
Fever	1	Scrofula	3
Scarlet	8	Teething	2
Typhoid	1	Tumor	1
Puerperal	1	Unknown	0
Remittent	0	Ulceration of throat	0
Bilious	1	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	3
Fracture	0	Worms	0

William A. Walters, City Inspector.
City Inspector's Office, July 16, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, JULY 30, 1842. No. 5.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY
JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XVII.

Pneumonia continued—Its Duration—The Causes of Pneumonia—Influence of Climate, Age, Sex, Predisposition and particular Bodily Positions on its Production—Chronic Pneumonia.

GENTLEMEN:—

At the close of my last lecture I illustrated by statistical data the direct influence of age on the mortality in pneumonia. But I wish here to guard you against a very lamentable error, that is, the ascribing to one cause alone this excessive mortality. It is only by studying all the causes, and all the facts at a knowlege of which we can arrive, that we can attain any satisfactory conclusions. Now if I affirm as a general fact, that the mortality of this disease is much greater in old subjects than in young, and that the adverse influence of age is very great, I state what I believe to be strictly true. But if I stop here I tell only half the truth—I do not explain the reason of the occurrence of this excessive mortality in old people affected with pneumonia. What is the reason then? It is because the disease is in most of these cases a secondary affection. Old people are, you know, subject to a great many chronic affections—changes of structure in different organs, and those previous diseases have so debilitated their systems, independently of the gradual inroad of age, that when pneumonia attacks them, it proves much more fatal than in young or vigorous patients.

The duration of pneumonia although not uniform—depending upon the violence and extent of the disease and the existing complications, the early use of appropriate treatment can yet be calculated within certain limits. Thus, in ninety-three adult cases the mean duration was fourteen days; in fifteen of these the disease terminated before the seventh day; in none earlier than the fourth day; in one on the twenty-seventh day, and in one on the forty-second day. It has been supposed that in old age the disease was more rapid in its progress than at an earlier period; and this is probably true in fatal cases, for the very evident reason that the co-existence of some previous disease which so often occurs, or the unavoidable diminution of the vital powers, the direct effect of advanced life, render the system less able to resist the progress of a violent attack. In milder and more favorable cases, however, the difference in duration is not probably very marked. Now when we come to examine the duration of pneumonia in young children under six years, we shall see a striking difference. It is true that in simple inflammation as it attacks healthy children, the duration is about the same as in adults, that is, about fourteen days for the mean. Still it must be remembered the acute form is sometimes very rapidly fatal, carrying off the little patient in three or four days; and this is especially true when it occurs in the course of measles, hooping-cough, &c. But in that form of the disease in children which appears as a secondary attack in the course of some chronic and debilitating disease, as chronic diarrhœa, it is usually a very insidious and chronic affection, continuing for many weeks, or even for months—I am unable to give you its mean duration.

An inquiry into the duration of pneumonia naturally suggests the question, does this disease ever terminate in crises? When I read the Clinique Medicale of M. Andral, many years ago, I was struck with the fact that some of his cases did, as he himself concludes, appear to have a termination in some critical evacuation. Since that period I have constantly had the subject in view, but have never been able to satisfy myself of its truth. I observe in looking over the recent publication of M. Guisolle, that he has carefully examined the subject, and these are the results he has arrived at:—In 130 cases of pneumonia there were thirty-four in which the period of resolution appeared to coincide with something like a crisis. Thus sweats, more or less abundant, were noticed in twenty-two cases; there was a spontaneous deposit in the urine in only five cases; while in thirty-eight cases which recovered, the urine in thirty-six, when treated with nitric acid, deposited a coagulum, and in fourteen of these this coincided with the commencement of convalescence. Occasionally, also, the period of resolution was noticed to correspond with a diarrhœa, or some form of hæmorrhage, as epistaxis or hæmaturia, or with an herpetic eruption about the lips. On the whole, however, I do not think that M. Grisolle's observations prove much in favor of what I understand to be a crisis; that is, the sudden disappearance, as if by enchantment, of a disease coinciding with some form of evacuation, as profuse sweats, diarrhœa, hæmorrhage, or the like. Indeed, when we come to look at his table, we shall see that the ninth, the fifth, and the sixth days, are his critical days, while the seventh, fourteenth, and twentieth days, are the old critical days of Hippocrates.

We will now proceed, gentlemen, to the consideration of the *causes* of pneumonia.

This disease prevails in all countries, and at all seasons of the year. It is a well-established fact that no region of the globe is free from it, and it is equally well ascertained that there is no season of the year in which this disease may not be met with. In some countries, however, the disease is more prevalent than in others, and there are particular seasons of the year in which it most frequently occurs. In the northern parts of Europe,—Great Britain,—Germany,—in the Canadas,—and countries where much cold weather combined with a moist atmosphere prevails, we find this disease more prevalent than in regions where the climate is warmer and more equable, such as the countries near the equator. It has also been satisfactorily established that the disease is more common during the latter part of winter and the early part of spring, than at any other season of the year. And this is what might have been expected from the fact that the disease is most prevalent in cold moist climates, because at such seasons of the year the greatest cold and moisture are prevailing, and there are also sudden and great changes from heat to cold, and vice versâ. It has been found that pneumonia is most prevalent in the months of February, March, April, and May; whilst during the summer and autumn it comparatively disappears, although cases do occasionally occur in the months of November and December, but not in the greatest number till the months in the spring which I have named; and it is curious to remark that at least one-half of the cases of 'epidemic pneumonia' described by authors, occur in the spring of the year. This then is the first point we notice in the enumeration of the general cause of pneumonia.

Has age any thing to do with the production of pneumonia? It would certainly seem to be the case that it has. Pneumonia is very common among children, particularly during the first and second years of life, or the period of first dentition. After this period the disease becomes much less frequent, till again, after the age of sixty years, it becomes one of the most frequent and fatal of all acute diseases. Thus, at the two extremes of life—early childhood and advanced age, pneumonia most frequently occurs; whereas at the middle period of life, it is much less common. We also notice what I have already stated, that at the two extreme periods of life the disease is in most cases a secondary affection, whereas in the middle period of life it is generally an idiopathic disease. The period of adult life when this disease most commonly occurs is very distinctly between the age of twenty and thirty years. This fact has been abundantly proved by numerous and accurate statistical tables.

Does sex have any effect on the production of this disease? If we examine the records of hospitals in relation to this disease, we will find that the number of males affected with pneumonia exceeds that of females as five to one. At first sight, then, it would appear that males are much more liable to this disease than females, and so they are, taking all things into consideration. But it has been noticed also that in mountainous regions and in certain districts of the country where females are exposed as much to the air as males, and in cases where females are engaged in active toil in the open air, such as selling fish or vegetables in the markets, where they lead a laborious life in the open air as men do, that they are just as liable to pneumonia; and that the only reason why females are not so frequently found to be the subjects of this disease, is that they are not generally so much exposed as males are to the vicissitudes of the weather. Again, when we come to study pneumonia in children, both sexes of whom are equally exposed, we notice no difference in the liability to this disease. It is thus quite apparent that the reason why we find more males than females affected by pneumonia, is that they are more exposed to the external influences which produce the disease. And here I may remark that undoubtedly certain professions and employments predispose very much to the developement of pneumonia. Persons whose employments require them to be exposed to great vicissitudes of temperature, such as bakers, blacksmiths, glass-blowers, are very liable to pneumonia. It would seem, however, that exposure to great changes of temperature is not so prejudicial, if not protracted. Thus it has been noticed that when persons much heated step out into the open air and speedily return, they are not so liable to an attack of this disease as when their exposure to a cold atmosphere has been protracted. We see a remarkable proof of the same fact in the immunity which attends the Russian practice of plunging into a cold bath immediately after a hot one. But if, after having been in a hot bath, a person were to remain in a cold one until chilled, dangerous consequences might certainly be expected.

A great deal of allowance must be made for constitutional predisposition. Experience also abundantly proves that a persons once affected by pneumonia is very liable to be afterwards attacked by it. Dr. Rush has recorded a case in which the patient was attacked fourteen or fifteen times by pneumonia, and other cases of a similar kind are on record. We must therefore, in estimating the causes of pneumonia, take into account constitutional predisposition, which no doubt in many cases belongs to particular families, just as the predisposition to tubercular consumption, rheumatism and disease of the heart.

These then are the chief predisposing causes of pneumonia. We have seen that certain seasons of the year—certain climates—age—and sex, exercise an influence in the production of the disease. What do we know of the direct exciting cause? What is there that in any given case would induce an attack of pneumonia? We know that penetrating wounds of the chest, such as those produced by bullets, knives, or daggers, will induce pneumonia. This is a well known fact, and is quite in accordance with analogy. It is not important, however, in a medical point of view to consider these causes. But it is proper to remark that external injuries of the chest do not predispose to pneumonia. Fracture of a rib even may be extensive, and no pneumonia result. This is, you are aware, quite different from what we see in the brain—blows on the skull often produce fatal affections of the brain. Now if we ask the great majority of practitioners what is the exciting cause of pneumonia, they will almost universally reply that it is sudden exposure to cold. This subject has been most thoroughly investigated by M. Grisolle, of Paris, whose powers as an accurate and experienced observer are well known. He has undertaken to investigate the influences of sudden exposure to changes of temperature on this disease. He found on examining his cases, that contrary to his anticipation, he could not trace the existence of this case in the production of pneumonia, in more than one-fourth of his patients. The cases on which he grounded his conclusions, were very numerous indeed. M. Grisolle very judiciously remarks that physicians are often misled by the statements of their patients, who mistake the sudden chill which marks the attack of the disease, for exposure to cold; whereas it is not the cause but the effect—the disease developing itself. Therefore, in all cases, when you desire to ascertain directly the facts as to the exciting causes of the disease, you must observe M. Grisolle's precautions, and closely question the patients whether they have not mistaken the precursory chill for the exposure to cold which induced the disease, and you will find precisely, as M. Grisolle did, that in three-fourths of the cases the chill was mistaken for the cause.

The effect of position has also, I am convinced, much to do with this disease. You know that in post-mortem examinations congestion of the lungs is frequently met with, and Cruveilhier remarked some years ago, that this in many cases is not an hypostatic congestion, but the commencement of pneumonia, and he maintained that the disposition of the blood to settle in this way during life was not simply a mechanical change, but the result of inflammation. This opinion has been gradually gaining ground since, and I believe it is now pretty well established that this change which we notice so often, is, in many cases at least, the effect of inflammation, and not simple congestion from a depending position. It was noticed some years ago in one of the children's hospitals in Paris, that during the prevalence of the epidemic pneumonia, the right lung was the seat of the disease. And on inquiry it was found that the nurses were in the habit,—and you know how mechanical these attendants are in large institutions for the sick,—were in the habit, I say, of carrying the children on the left arm, and laying them in bed on the right side. The experiment of reversing the position of the children was tried, and immediately the whole process was reversed—the pneumonia did not diminish in the frequency of its occurrence, but the left lung was most frequently affected. In nine cases out of ten the left lung was the seat of the disease, just as in the former circumstances the right lung was; showing conclusively, I think, that the position of the body has something to do with the production of this disease. It is very probable that the so frequent occurrence of this disease in old people, may be properly accounted for by reference to this very fact of the influence of particular habitual positions of the body. Aged persons are, you know, often affected with chronic diseases which confine them to their beds. So also with children,—they are generally kept for lengthened periods in one position.

Now the form of the disease which we have been considering, is the simple pneumonia of adults. I should leave the subject in a very imperfect state were I to omit the description of pneumonia as it develops itself in connection with other diseases. Febrile affections of all sorts predispose to the development of pneumonia. Common continued fever—the eruptive fevers, particularly measles and small-pox, hooping-cough, all predispose to pneumonia. Louis has laid down a general rule on this point, which is this, that the danger of secondary inflammation is always in proportion to the amount of febrile reaction. Take, for instance, a case of common continued fever, in which great febrile excitement is present, but no local affection. Now the danger of secondary inflammation is much greater in such a case than in one where the febrile reaction has less intensity. Hence we see the importance of keeping down this, although it does not diminish the duration of the disease—as I believe it does not. Sometimes, however, pneumonia develops itself at the first step of the disease, and before the eruption has appeared. But generally speaking, the pneumonia exhibits itself at a later period and after the appearance of the eruption, or during the period of desquamation. It is not a little remarkable, that in two disease so nearly alike as measles and scarlatina, one should be very often followed by pneumonia, and the other rarely.—But such is the fact; pneumonia being very common indeed in measles, but rare in scarlatina. The only explanation I can suggest is that afforded by the fact, that in measles we have a very violent concomitant bronchitis, which is absent in scarlatina. In children the disease is almost always a secondary affection, existing especially in complication with the diseases of dentition, such as chronic diarrhœa. It also not unfrequently occurs in the course of hooping-cough, when long protracted, and other diseases which debilitate the powers of the constitution. This form of the disease is remarkably insidious in its mode of development.

There is such a thing as chronic pneumonia, although it is undoubtedly a very rare form of disease. We sometimes find in the lungs portions that are hard, rather dry, unaërated—intersected by white lines, and of a grayish or whitish color; most commonly these masses are found in the neighborhood of tuberculous deposits. The grayish form, which is sometimes dark enough to be blackish, is sometimes mistaken for melanosis, which is, however, something quite different, being in fact an heterologous or foreign deposit, while this is nothing more than pulmonary tissue condensed by chronic inflammation and colored deeply by the natural black coloring matter of the lungs. This chronic pneumonia is of so rare occurrence that its diagnosis and treatment are not yet established.

In my next lecture, gentlemen, I shall speak of the complications and duration of pneumonia, and of its symptoms.

LECTURES ON GONORRHŒA AND SYPHILIS;

BY

JOHN HUNTER, F. R. S.

DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON.

[*From MS. Notes of Dr. Thos. Shute.*]

Lecture VI.

ON CHANCRE, ETC.

Seminal weakness is a supposed consequence of clap. This opinion arises from a mucus which is discharged with the urine, by some men who have been clapped; it generally comes away in the greatest quantity when at stool. It is the secretion of the prostate, and what are improperly called the vesiculæ seminales. From its being a common opinion that discharge of semen produces weakness, such people suppose that they grow weak, which opinion may produce actual weakness. The color and consistence of semen is very much like cream, and what is afterwards ejected is the secretion of the before-mentioned parts; it becomes more fluid on exposure.

The fluid of the vesiculæ seminales differs in consistence, color, and smell, and is not more fluid when exposed. It may be urged that the color alters by putrefaction; I examined it, therefore, in a man almost immediately after his death, and found it of a lighter color, but it was still darker than semen. The fluid in the vas deferens always appears different from that in the vesiculæ seminales.

A gentleman who had such a discharge was extremely uneasy about it; I did all I could to explain to him that it was not semen, but without effect. I at length desired him to make an experiment and compare them; this he did, and was then convinced of their difference.

Many strengthening medicines are recommended for this disease, but all of them probably have no effect. It may arise from a too great degree of action in the muscles, as the accelerators urinæ, by which the fluids are forced out.

Chancre is produced from the venereal virus contaminating a surface which is not secretory. It, therefore, has no means of forming pus to wash off the offending matter, but by first ulcerating. The poison has not strength enough to blister the part, otherwise a suppurative surface might be produced without ulceration; for, when the cuticle is removed, the cutis is very susceptible of ulceration.

Chancres are not so frequent as gonorrhœas, for several reasons: from their situation the matter is more likely to be wiped off before it can take effect, and from their being produced on a cuticular surface, which, perhaps, is not so susceptible of the disease. The proportion may, perhaps, be six to one. The parts in men most exposed to chancre are generally the frænum, glans, prepuce, skin on the body of the penis, and scrotum. It is generally later in appearing than a clap; however, it has been known to appear in twenty-four hours, and in one case it was seven weeks.

In the glans it generally appears at first as a pimple full of matter, with very little surrounding hardness, and the inflammation is very circumscribed. In the prepuce the hardness is generally much greater, its loose cellular texture producing it, by admitting of an easy extravasation of lymph. It is very necessary to attend to the first appearance of a chancre and its progress, by which the state of the constitution will be known, and the proper mode of treatment. Sometimes they form a deep slough, strongly tending to mortification, sometimes attended with hæmorrhage. They first begin with an itching in the part; this soon changes to pain. The urethra sometimes sympathises in a slight degree, causing a little pain in making water, but not producing any discharge. This sympathy will sometimes come on before the appearance of the chancre.

Those which are on an exposed surface scab over, as on the body of the penis and scrotum.

Chancres in women are situated on the skin of the labia, and are generally more in number from the surface being more extensive. The matter sometimes runs down to the anus, producing chancres there; sometimes chancres are produced in the vagina.

Cure of Chancre.—The simplest method of treating chancres is to destroy them by caustic; this must be repeated until the granulations look healthy. This mode of treatment will not succeed in all cases, because in some the venereal inflammation will increase faster than the caustic destroys it; if, for instance, the caustic destroys the surface for the thickness of a shilling every day, and the venereal inflammation increases as much every day, then no ground is gained. This objection may, perhaps, be obviated by using the lapis septicus.

The proper applications are mercurials, which are better joined with balsams. Precipitate is a good application when in such quantity as to act as a digestive; to prevent its irritating too much it may be joined with opium. Applications have their powers soon weakened, the matter covering and defending them from the stimulus If the applications are joined with watery substances, their effects will last much longer, from their incorporating with the matter.

Mercury internally should always be given for chancre.

WARTS AND BUBOES.

Chancres often leave in the part a disposition for ulceration, the cicatrices frequently breaking out again; these ulcers, however, are not venereal. This can only be ascertained with certainty by repeated experiments. When spreading they are slower in their progress, the surrounding edges are not so hard, nor do they produce buboes.

These breakings out are sometimes periodical, appearing exactly after the same intervals for several times. From clap there are sometimes the same periodical returns. As this is not a specific disease, it is, therefore, generally difficult to cure.

These returns are generally on the prepuce, but always at or near the place where the chancre was situated.

From venereal virus parts acquire a disposition to form warts. Chancres often heal in such, and they often arise in cases of claps.

It is an excrescence of the cutis, covered with cuticle, arising in a granulated surface. It never increases at its basis, but has a power of increasing from itself, swelling out into a rough surface, therefore appearing to hang by a penduncle.

It is so little of a true animal part, that it easily loses its life; a surrounding inflammation often destroys it.

Escharotics, by destroying a part, will kill the remainder; therefore it is not always necessary to destroy the whole.

The rust of copper, with savine-leaves powdered, is often used to destroy them; they have so little life that a slight stimulus often kills them.

Absorption of the Matter.—This may be divided into three kinds: the first, when applied to a surface, and taken into the constitution without having produced any local effect; the second, when the matter had previously produced a local effect, but no ulceration, as when absorbed from a clap; the third is the absorption from an ulcer. This last is by much the most frequent.

If a comparative view was taken of the proportionate number of poxes received in the different ways, perhaps they might be nearly as follows:—The first mode when compared with the second, one in a hundred; the second compared with the third. one in a hundred. In chancre, perhaps not one in a hundred escapes from absorption; and in five hundred connections with infected persons, not more than one, perhaps, will be poxed in the first way.

When the matter is taken up, probably it produces in the beginning of the absorbents the same disease. The inflamed lymphatics pass often to the pubes and groin; often two or three abscesses are formed on the skin of the penis in the course of the lymphatics. The second is a contamination of the lymphatic glands, and these appear much more susceptible of the stimulus than the lymphatics themselves.

The first gland is always affected, but none of those which the matter passes through afterwards.

When matter is absorbed from the hand, it often forms a bubo near the bend of the cubit, on the inside of the biceps, but then there is no swelling of the axilla. Why the first gland only should be affected, is not easy to determine, whether the matter is weaker from dilution, or that it afterwards passes through deep-seated glands, which are not so susceptible of the disease. The matter from a venereal bubo is capable of communicating the disease.

BUBOES IN WOMEN.

As in these there is a much more extensive surface for absorption, the seat of the bubo is different. When the chancres are in the labia, the bubo is generally in the groin; when in the perinæum or near it, then it is sometimes in the angle between the labium and thigh. From the clitoris and nymphæ the bubo is in the course of the round ligament.

Some buboes are very indolent; others are of an erysipelatous disposition.

Cure of Buboes.—They should be dispersed if possible. The powers of mercury may be increased by the manner of giving it; that is, by considering the situation of the bubo, and applying the mercury on such a surface as that it may pass through the bubo in the course of absorption; but sometimes the situation is such that the surface for application is not large enough, as when the bubo is on the penis or in the round ligament, or near the pubes. When the bubo is on the thigh, then the surface for application is very large, because the lymphatics of that extremity pass in common through it.

Evacuations should be used; vomits are sometimes useful; they act, perhaps, by revulsion.

If the bubo is of an erysipelatous disposition, bark is the best medicine.

The matter of a bubo is proved to be venereal from the accident which surgeons have sometimes met with in cutting their fingers. In the opening it is only to be considered as a common abscess, a simple incision being sufficient. The quantity of mercury to be given is not ascertained; it should be given for some time after all the appearances are gone; it ought also to be continued during the whole of the cure. If the cure is entirely performed without mercurial applications to the sore, then more mercury may be given than is necessary, from the length of time which it may take to heal. And by the application of mercury to the sore, it prevents our knowing, from its appearance, the internal operation of the medicine.

There are some buboes of a particularly bad disposition, which seem to arise from a particular constitution. In such, when the venereal disposition is nearly or quite destroyed, a new disposition arises, causing the sore to put on a foul appearance, and to ulcerate and fly out very fast. Mercury increases the disposition, making it worse; bark should then be given very plentifully, which generally brings the sore into a better state; it will begin to look well and heal, and will continue healing until it is nearly well, when it will again take on the venereal disposition, and begin to fly out again, when mercury must again be had recourse to. Thus these cases are continually fluctuating, getting better and worse with the same medicine, vibrating backwards and forwards as the pendulum of a clock. With each medicine it will nearly heal up before it flies out, and generally some ground is gained each time until it gets quite well. It is sometimes necessary to give hemlock in these cases.

Hemlock has sometimes cured them. If this new disposition arose from the venereal disease, and the giving of mercury joined, then the disease would be specific, because the same two causes always producing it, a disease of the same species must have been the consequence; but probably it arises from the constitution, otherwise it would be more frequent. Perhaps there is something scrofulous in this disposition; this disposition makes the cure of the venereal more uncertain.

When the mercury disagrees with the ulcer, the venereal is weakened, but not destroyed.

The cure will be to attend to the predominant disease. It often gives way to hemlock; sarsaparilla is often of service; sea-bathing would, perhaps, be better than either.

CONSTITUTIONAL VENEREAL DISEASE.

When the venereal disease gets into the constitution, it appears in a thousand different shapes; this depends, perhaps, on the time it has been there, and the habit.

The time of its appearing after absorption is usually about six weeks; but this is uncertain, it sometimes being much longer. A gentleman who had a chancre had eruptions come out all over him in a fortnight, but then he had had a clap for some time before, and it might have been in consequence of a previous absorption, or it might have been received in the first way by some previous connection.

The effects produced are usually in proportion to the time the disease has been in the constitution.

When appearances of the disease have been removed, it frequently returns in another form, but seldom attacks the same part twice; the same part seems not to be again susceptible of it. Each time that it returns it is slower and slower in its progress, and becomes more and more serious, being each time more difficult to cure.

The difference which there is in the time of its appearance at first perhaps makes no difference, but each succeeding appearance acquires new strength.

Recent cases are easiest of cure; old ones are more difficult, in proportion to the time the disease has been in the habit, even where the symptoms are the same. It is frequently said that this disease sometimes lurks a considerable time in the habit; whenever that is the case, the constitution must have been a long time accustomed to it. Every return of the appearance of this disease is at greater intervals of time, until it may be years in returning. In time it becomes so interwoven in the constitution that the nerves are not affected by it. Its becoming worse may not arise from its being really worse, but from the disease attacking parts whose powers of life are weaker.

The appearance of the disease is in the most external parts of the skin, mouth, and throat. When it first appears upon the skin, it is all over mottled with small copper-colored spots; many of these disappear, and others continue, gradually altering their size and appearance; a copper-colored scurf or scales form, which fall off; each time they grow thicker and thicker; matter in time forms under this scab, and it ulcerates, making a foul sore.

These spots spread until frequently they are the size of a shilling. The inflammation of the ulcers is seldom attended with pain, as in chancres and buboes. From the loss of cuticle an exudation first arises, which gradually changes to true pus. The copper-colored spots frequently appear in a night's time; they are a discoloration of the cutis under the cuticle. They are seldom attended with so much violence and pain as those ulcers which arise from the immediate contact of venereal matter. This disease sometimes attacks the roots of the nails of the fingers; old authors speak of the nails sometimes falling off.

When these eruptions attack a part where skin is opposite to skin, as between the nates, the perinæum, and thigh, under the scrotum and arm-pit, they there put on a different appearance, forming a white scurf and a rough warty kind of surface, discharging a white matter. These are also more painful.

Ulcers in the throat and mouth form no scab, and their progress is usually quick, whereas in eruptions it is frequently very slow. The ulcers are very foul, with thickened edges, which is usually the case in all ulcers that are not disposed to heal; they are not so painful as the common sore throat. The patients speak thick, as if their tongue was too large, and rather snuffle in their nose. When these symptoms have been cured they will frequently return again the same as before, but it is more frequent for them to return in a different form. The disease generally then attacks the fascia, tendons, periosteum, and bones; these symptoms are slower in their progress, and more difficult to cure. The longer the disease has been in the constitution, the less is the inflammation produced by it, and the ulcers which it forms discharge a glairy kind of matter instead of pus. The diseased parts often acquire an indolence when the virus is destroyed, neither easily suppurating or ulcerating. Nodes in bones and tendons will sometimes remain for years.

I doubt whether the matter discharged from ulcers formed by the constitution is venereal or not; my reasons are that a bubo is never produced from an absorption of this matter; if there was, buboes would arise from venereal ulcers in the leg, and buboes in the axilla from ulcers in the arm. If the matter was venereal, the œsophagus would be clapped, by ulcers in the throat and mouth. From considering these circumstances, I inoculated a man in the back with matter taken from a pocky sore of the same man, in three places, and then made a fourth puncture with a clean lancet; none of these produced any effect. I afterwards inoculated him with the matter from a clap, and it produced a chancre; I also inoculated another man from the matter of his own chancre, and it produced a chancre.

With the matter from a constitutional ulcer I inoculated a clean patient, and it produced no effect.

It appears very extraordinary that the matter from such constitutional sores should not be venereal. It may be said that, as a proof of their being venereal, mercury will cure them; but that is no proof at all.

The effects produced on the constitution are nearly the same from all irritations.

When the poison enters the constitution it causes rigors, headache, and is very similar to the first attack of fever, it produces hectic symptoms, like other stimuli, and causes loss of appetite and flesh.

The symptoms which it produces are infinite; a gentleman had a teazing cough for a considerable time, which would give way to nothing but mercury, which quite cured him. Local complaints remove the continued fever.

REVIEW DEPARTMENT.

Quarterly Summary of the Transactions of the College of Physicians of Philadelphia. May, June, and July, 1842.

We have too long neglected to notice this extremely interesting document and its predecessors. We sincerely rejoice in observing the evidence which these papers present of the talents, zeal and fraternal feeling of the members of the College. In the present 'Summary' we find an able 'Report on the Theory and Practice of Medicine,' by Dr. S. Jackson. The following extracts will be read with pleasure and profit:—

> Though, as we have already said, there has been no grand *anabasis*, during the last twelve months upon which a writer can expatiate with delight to himself or entertainment to his readers, yet some excellent books have been published, some new and plausible methods of treatment have been proposed, and the whole science is resplendent with its peculiar honor and dignity. Yet it must be confessed that, here and there, a solitary member of the profession fancies he can look back to periods of juster principles and brighter illuminations, to sounder practice and happier results. Nothing, we are persuaded, can be more erroneous. In no age of the world did the science flourish as it does at the present. Never did it promise or perform so much; never till lately was it wholly based on the everlasting foundation of facts and plausible induction: and when it is considered what minds are now engaged in the ardent cultivation of medical science, their many importunate motives for unwearied exertion, their frequent friendly communications, that generate a certain medical atmosphere in which, as the Scripture says, 'they seem to live, to move, and to have their being,' there is every reason to believe that the highest hopes cannot be disappointed. It cannot now be denied that physicians are an harmonious body. The contentions and jealousies that once existed, are now totally unknown in Philadelphia, and there is every reason to believe that the same good fellowship obtains throughout the profession in Ame-

rica. Even rival schools can now exist in the same city without envy and without reproach.

But however harmonious physicians may be in Philadelphia, their opinions, as might be expected, are not in unison on every subject. Whoever expects this in an uncertain science, expects an impossibility. But though an entire accordance cannot be attained, it would yet be highly to the honor of the profession, to render their *concordia discors* as unfrequent as possible; therefore instead of noticing the various publications of the last year, an ungrateful task, we shall merely note some deficiences in the practice of medicine, which merit particular attention.

There is one point on which some physicians are more communicative than the interests of the profession or even truth would seem to require, maintaining that fever must run its natural course, whether for life or death, and that it cannot be safely abbreviated by medical means. Swift, because he concealed the good and exposed the evil of his character, was called a hypocrite reversed; these men by obtruding the supposed inabilities of medicine, might not unjustly incur the same imputation. A long and intimate acquaintance with fever, particularly the scarlet, remittent, and typhus—has convinced us that these diseases are often shortened, and too often fatally prolonged by medicine. We shall not even except the small-pox and measles, under particular circumstances; for when these tend to congestion or local phlogosis, the reaction prolongs the original disease.

The opinion, that the course of a fever is limited to a certain day, seems to ally it to the march of an army to battle, or to the *passus militaris* of the Romans, which was to carry them to a certain place in a given time, whether the way was smooth and facile, or obstructed by whatever impediments; whereas it should rather be likened to the journey of one whose intelligent servant smoothes the way, and thus secures and hastens the passage. So the *servant of nature*, who secures a mild disease on every succeeding critical day, will attain an early solution; whereas the converse of this will prolong the fever, and often lead to a fatal termination. We are well aware that it is not our province to discuss this subject; we merely mention it as one of the discrepancies, or rather one of the diseases of the profession, to cure which would contribute greatly to its honor and dignity. In all our intercourse with the non-professional, let us remember they are totally ignorant of the laws of the animal economy, and, therefore, beware of scattering, as did Ulysses, ambiguous phrases among them, which passing through unlearned heads, are sure to be misunderstood and distorted.

With respect to another practice, in which there ought to be a nearer approach to unanimity, there are two opinions in direct antithesis. The old practice of annihilating fevers by antimony, fell into the horrors of many, as soon as Brussais' doctrine had taken possession of their minds. Experience, however, which always rises paramount at the sick bed, and which has often shown that the most irrational theorist may be a very skilful practitioner, soon restored the recently lost honors of the old febrifuge, with a portion of even the *physiological* physicians. They could not fail to remember, that during the many years they had used this medicine, they had seen it do much good and no evil; that they had known it to annihilate fever without any increased evacuation, thus showing its pre-eminent febrifuge powers; nor could they fail to reflect, that what they had given so largely, with every evidence of benefit, could not be that omnipotent evil they had dreamed of in tartar emetic. Hence a reaction has been effected in favor of the condemned medicine; and so far indeed has it been carried, that some of the French physicians use it even in typhus fevers, wherein its most strenuous advocates in America consider it as seldom admissible.

But still some of our number refuse to prescribe it in remittent fevers, in scarlatina, in phlogosis of various serous membranes, and some go so far as to denounce it even in pneumonitis; whilst others consider it as of primary utility in nearly all fevers wherein the excitement is to be reduced, and a centrifugal determination obtained. One party supposes the other to do great evil, whilst this must reflect on the first for omitting to do much good. This is a discrepancy among physicians of the highest grade which ought not to exist; it is a problem in practice that merits our serious investigation, and therefore, in the language of Bacon, we note the subject as wanting.

Another of the most distinguishing traits of the present practice, is the use of iodine. Mercury was called the Sampson of medicine; if there was ever a stronger man than the Syrian giant, we should certainly give his name to this mercury of the nineteenth century, which is now in almost universal use in relation to all the mysteries of deobstruction and alteration. It is a medicine of great power, both for good and for evil. It is stated, during the past year, that when given for goitre to a young, healthy, blooming, full-bosomed girl, it soon removed the disease, and with it all the patient's appearance of health, and every vestige of her mammary glands. But the wonder did not cease at this interesting point; for in about twelve months nature had restored to this fortunate bereft, her entire mammæ as also her former healthy appearance—all this most happily too, without any return of her pristine disease.

In one young girl to whom it was given for goitre, it emaciated her, destroying her health and beauty without removing one half of her disease. We saw her occasionally for six years, after this cruel experiment, and she had not then recuperated in the smallest degree. This tremendous medicine has even been known to remove the testicles, thus effecting a complete emasculation. These facts, however, are not arguments against the use, but cautions against the abuse of the new medicine. Even bark and mercury did far greater evil before physicians had learned their many virtues.

The late successful use of this medicine in erysipelas is a highly important fact, but here alas! we have to remember the fate of the lately vaunted mercurial ointment. In fine, the iodine is the catholicon of the present time, which all must acknowledge is a medicine of no ordinary powers both for good and for evil, as also one that merits a patient investigation. The mere drudgery of experimenting is past; the reasons of its use are pretty well ascertained, and further investigation will bring pleasure to the philosophical physician, and no little profit to the profession itself.

Homœopathy has become an evil of such magnitude that it ought to be opposed by all the powers of the regular profession; but how to do this in a manner consistent with the honor and dignity of science, and at the same time with any hope of success, is perhaps an impracticable problem. To make an honest impression on those who are interested in the trade, need not ever be attempted; and as to their advocates, they of course will not stand forth convicted of their own folly. They afford a lively example of the Hudibrastic satire—

'Convince a man against his will,
He's of the same opinion still.'

The profession has nothing to fear with respect to loss of emolument, but they have to complain that it distracts the minds of many well-meaning people who are ignorant, as nearly all are, of the principles of the Hippocratic art. It is vain to tell them that an experimental practice which begun not fifty years ago, and which received but little attention the first thirty years, must be as yet in darkness and hesitation, even if it rest upon the true and everlasting principles of the healing art. It is equally vain to tell them that nature cures nearly all diseases, and that the physician is merely her servant, helping her in all her disabilities and correcting all her aberrations; it is vain to reason with them at all, for as Locke says, 'where premises are not settled there can be no argument.' But is it not an eighth wonder of the world, that there are men of at least moderate minds and attainments, who can favor a trade which originated with a vagabond doctor,* without business or character,—a trade which tramples upon the recorded experience of more than 2,000 years; which despises all knowledge of anatomy, physiology, chemistry; which pretends to practice the tremendous art of curing disease with little or no preparatory study; above all, that clergymen should run from house to house, sounding the praises of the new philosophy, that a decillioneth part is greater than the whole? One apology may be found for them—they are not capable of ascertaining that the whole is founded in absurdity, and much of it in palpable falsehood, and physicians cannot furnish them, as Dr. Johnson said, with both an understanding and an argumentation.

It is hard for the profession, which has been for so many ages devoted rather to public good than private emolument, to contemplate in silence the immense mischiefs which the impostures of Hahneman are daily perpetrating. Imagine for a moment the consequences to future health of the milder internal inflammations, which nature merely mitigates under the homœopathic treatment; they remain nearly imperceptible to the patient, but they are the hidden embers of the future phlogosis, and the patients never know health again. Physicians cannot contemplate without painful and benevolent emotion this enormous evil, but they can oppose it by silent contempt, thus suffering it to die a spontaneous death, as it has already done in Germany and France. Cicero said that he had remedied many evils in the state by silent suffering and painful concession—*multa tacui, multa pertuli, multa concessi, multa meo quodam dolore sanari.* Physicians will best consult their own dignity and the honor of medicine, by imitating the patience of the prudent Roman; they may state in the briefest and most dispassionate manner their objections to all manner of intercourse with impostors, but they ought not to condescend to argumentation. Juvenal says that the precept of Solon, know thyself, came down from heaven—*e cœlo descendit gnothi seauton:* however this may be, there is one precept of practical wisdom which we all acknowledge to have come from thence, and which some may consider as not inapplicable to the physician in all his converse with the friends of Homœopathy—'cast not your pearls before swine, lest they turn about and rend you.'

The Mineral Springs of Western Virginia; with remarks on their use, and the Diseases to which they are applicable. By WILLIAM BURKE. New York: Wiley & Putnam. 1842. 12mo. pp. 291.

This volume contains a considerable amount of accurate geographical information relative to the celebrated Sulphur Springs in Western Virginia. That the statements of the author, respecting the sanative and curative influence of the waters, are to be received with many grains of allowance, is to us abundantly apparent from the following sentence:—

'The Red Sulphur Springs came into the possession of the author of this work in the autumn of 1832, by purchase.' p. 126.

The work is quite evidently an elaborate advertisement, the greater portion of its pages being filled with extravagant assertions respecting the 'mysterious' and 'extraordinary' agency of the waters, and the high-flown panegyrics on the 'worthy,' 'amiable,' 'bland,' 'elegant,' 'civil,' 'obliging,' 'high-toned,' graceful,' 'courteous,' 'lively with the gay, and grave with the austere' proprietors of the numerous 'Springs.' Yet we will endeavor to extract a few items of information relative to the situation and composition of these mineral waters, and then subjoin, for the edification of our readers, some delightful specimens of Dr. WILLIAM BURKE's poetical talent and descriptive powers.

The Hot Springs (Bell) are three in number. One of them is of the temperature of 96° Fahrenheit, and of a moderate depth, and sufficiently capacious for several persons to bathe at a time. Spout Bath 103. Hot Bath 108. The temperature (Col. Perkins) of the Spout Bath is 106°. These baths are particularly resorted to by persons afflicted with gout, rheumatism, and eruptions of the skin.

The Sweet Springs are situated on the head waters of Dunlap's Creek. in the county of Monroe, in a delightful valley, the air of which is pure and dry. These waters (Col. Perkins) were discovered before any of the mineral waters in this part of Virginia were known, in 1764. In 1773 they began to be noticed as a watering place, and in 1774 were analysed by Bishop Madison, the President of William and Mary College, but which analysis I have not seen. The water is at 73° Fahrenheit; the baths for both male and female visiters are under the same roof, divided by a brick wall in the centre, and each about twenty feet square, and the water four and a half to five feet deep. In plunging into these waters a slight shudder, which in my case, and indeed generally, was succeeded by a delightful glow. One is very much induced to linger in the bath, but five to ten minutes, in most cases, are found better than longer.

Few mineral waters have acquired such fashionable and well merited celebrity as the Sweet Springs. The name is calculated to convey erroneous impressions of their taste, which is like a solution of a small quantity of a calcareous or magnesian carbonate. The excess of the carbonic acid, however, gives the waters a briskness productive of a very different effect on the palate from what an imperfect mixture of the earths would produce. The first effects of this water, due to its temperature and gaseous contents, are a feeling of warmth to the stomach, with the sensation of fullness of the head and some giddiness. Taken at stated intervals, in moderate quantity, it will produce a moisture on the skin and increase the flow of urine. If the stomach be in a good state, it gives additional appetite, and imparts fresh vigor to the system. Its operation on the bowels varies at first; but after a protracted use it will generally be found to induce a costive habit.

The specific gravity of the water (of the Red Spring) compared with pure water at the same temperature, and pressure equal, is 100029. Subjected to the influence of chemical re-agents, it presents the following characters:—

With a solution of chromate of potash, the yellow color becomes greenish yellow.
" nitrate of mercury, a grayish-brown precipitate is formed.
" acetate of lead; the first drops give a brown colored precipitate; an additional quantity of a yellowish white precipitate.
" bisulphate of copper; at first brown, succeeded by a bulky greenish-gray precipitate.
" sulphate of silver, a brown, succeeded by a yellowish white and flocculent precipitate

---

* See Leo Wolf on Homœopathy—incontrovertible authority.

With a solution of muriate of baryta, a white precipitate, insoluble in acids.

" oxalate of ammonia, a white precipitate.

" nitrate of silver and ammonia, white precipitate, which becomes brown and purple in sunlight.

" nitrate of copper and ammonia, a pale bluish-green precipitate is formed, after the first few drops of the re-agent have separated a brown precipitate.

" tincture of iodine, added to a large bulk of the water, containing starch dissolved in it, instantly gives a blue color to the starch.

Analysis.—Indications above described afford evidence of hydro-sulphuric acid in the water, while the iodine solution shows that it exists in a relatively small proportion. A bottle of the water was mixed, at the moment of taking it from the Spring, with a small quantity of oxide of bismuth, and closely sealed. After the agitation due to carriage, and rest for several weeks, it was found that the particles of oxide of bismuth were rendered brown superficially, and no traces of hydro-sulphuric acid remained in the water. The oxide contained carbonic acid, and less than one-third of a grain of the oxide had absorbed and combined with all the hydro-sulphuric acid, contained in about fourteen thousand grains of the recently drawn water. By careful experiments, in which the hydro-sulphuric acid was measured by its action on iodine, and the latter weighed in its silver compound, the bulk of the hydro-sulphuric acid was ascertained.

50,000 grains (about seven pints) of the water, from which the hydro-sulphuric acid had been removed, afforded by the usual processes 2698 grain measures of gases, or one volume of gases from 18½ volumes of water.

1000 parts of the mixed gases are made up of

Carbonic acid gas	4·19
Nitrogen gas	4·77
Oxygen gas	1·04
	1·000

The two latter gases form the bulk of our atmosphere, in the proportion of 79 nitrogen to 21 oxygen—477 of nitrogen requires 126 oxygen, while the analysis gives 1·04, showing that oxygen is abstracted by the constituents of the water. All the well-corked bottles had rarefied atmospheres over the water, and when they were pierced even at 32° Fahr., air would enter. A well-sealed bottle, containing the hydro-sulphuric acid gas in the water, afforded for 50,000 parts of water 3088 of mixed gases from less than 17 volumes of water, consisting of

Carbonic acid gas	1245
Nitrogen gas	1497
Oxygen gas	260
Hydro-sulphuric acid gas	86
	3008

Gaseous contents of a gallon, or 231 cubic inches of the Red Sulphur Spring water—

Carbonic acid	5·750
Nitrogen	6.916
Oxygen	1·201
Hydro-sulphuric acid	0·397
	14·264

In this analysis, the proportion of oxygen gas to the nitrogen is still smaller, a result which accords with other observations made at the same time. The hydro-sulphuric acid gas is the most active of the gases found; while the carbonic acid gas acts the part of an acid, in rendering earthy salts soluble in the water. 50,000 grains (about seven pints) of this water afforded by slow evaporation in air at 200° Fahr., a light yellowish-brown matter, which, after it has been carefully dried, weighs 20 56-100 grains. At the temperature of 240° Fahr., this residue becomes changed, and suffers a loss of weight, being reduced to 17·55 grains. This residue contains the saline part of the water, and is composed of—

Silicious earthy matter, containing traces of oxide of iron and alumina, probably suspended merely	0·70
Sulphate of soda in a dry state which forms with the water 802 grains Glauber's salts.	3·55
Sulphate of lime	0·47
Carbonate of lime dissolved in carbonic acid.	4·50
Carbonate of magnesia dissolved in carbonic acid, and forming the 'fluid magnesia.'	4.31
A peculiar substance, containing Sulphur combined with organic matter	7·20
	20·55

The Salt Sulphur Springs, three in number, are situated in the county of Monroe, in 37½° north latitude, and 5° longitude west of Philadelphia, and at an elevation of about 1400 feet above tide water. All the Springs are situated on 'Indian Creek,' a small lime-stone stream which rises in a valley a few hundred yards above the Old or Sweet Spring, and pursuing its 'devious way for about 23 miles in a south-west direction, finally empties into New River, in Monroe county. It derives its name from the circumstance of the Indians, who in former times were in the habit of entering the valley of Virginia from Kentucky and Ohio, almost invariably making it their 'camping stream.' Their graves, along with other traces of their frequent resort to this particular spot, are occasion ally met with at the present day.

It appears from the statement of some of the 'oldest inhabitants,' that the Old or Sweet Spring was discovered in 1802 or 1803, by Alexander Hutchison, Esq., who was engaged in boring for salt along Indian Creek. For several years it enjoyed much celebrity, and was annually the resort of a large company. The house occupied as the hotel, and several of the old cabins, are still standing. The opening of the Salt Sulphur Spring, the medical properties of which are so much more strongly marked, and the erection of commodious buildings near it, soon destroyed the fame of the Sweet, the water of which is at the present time used almost exclusively for the baths, although there are some individuals who still prefer it to that of either the Salt or New Spring. To gratify such, and at the same time to test the value of the water, the enterprising proprictors, in the summer of 1839, caused the Spring to be deepened and thoroughly repaired. At present, it is enclosed in a white marble reservoir, two feet square by two feet four inches in depth, over which is erected a neat wooden edifice, of an order 'sui generis.' In taste, smell, color and constituents, it strong resembles the Salt Spring, but it is much more feeble as a remedial agent, which is to be attributed to its containing a smaller quantity of the active principles common to both. The second Spring, or the Salt Sulphur proper, was discovered in 1805, by Erwin Benson, Esq. He was induced to believe that either sulphur water or salt might be found in considerable quantities at the spot now occupied by the Spring, from the fact of its being the favorite 'Lick' of immense herds of buffalo and deer. Under this impression he began boring, and had penetrated but a short distance below the surface, when he struck the vein of sulphur water now constituting the Spring. Like the Old, this Spring is enclosed in a marble reservoir, two feet square, and about two feet ten inches deep, but from the boldness of its sources, it is probable that this Spring will be enlarged. It is protected from the influence of the weather by a neat and appropriate edifice, furnished with seats. The water possesses all the sensible properties of the sulphur waters in general.

The following analysis of this Spring is furnished by Professor Rogers, of the University of Virginia:—

Solid Ingredients.—Sulphate of lime; sulphate of magnesia; sulphate of soda; carbonate of lime; carbonate of magnesia; chloride of sodium; chloride of magnesium; chloride of calcium; iodine, probably combined with sodium; sulpho-hydrate of sodium and magnesium; sulphur, mingled with a peculiar organic matter; peroxide of iron, derived from proto-sulphate.

Gaseous Ingredients.—Sulphuretted hydrogen; nitrogen; oxygen; carbonic acid.

The bubbles of gas that are seen adhering to the sides of the Spring, are composed almost entirely of nitrogen.

Dagger's, or Dibrell's Spring, is situated in a glade near the western base of the Garden Mountain, on the main road from Lynchburg to the White Sulphur, via the Natural Bridge, from which it is distant 14 miles.

But now for a few specimens of the 'Sublime and Beautiful' from Burke. Here they are—

'Orient pearls at random strung!'

England has her Bath, France her Aix la Chapelle, and New York her Saratoga—places of fashionable resort, that present varied attractions to the fancies of those who live for admiration and the excitements attendant on dissipation; but they want that calm repose, that freedom from restraint, which render the society of our Virginia Springs so delightful. Whensoever the whiz of the steam-engine shall have invaded the solitary grandeur of our mountain defiles, then will the charms of our scenery and society deteriorate under the ruthless hand of a utilitarian generation. (Alas!)

* * * * * * *

The Springs of Western Virginia form a group unrivalled in this, and perhaps in any other country. Had they all been congregated in the city of New York, it is doubtful whether they would sustain their present reputation. (Profound remark!)

* * * * * * *

Who would look for a riddance from his ailments in the murky atmosphere and crowded streets of a city? It is the sweet country alone that can invigorate the enervated constitution, raise the drooping spirits, calm the agitated mind, inspire the finer emotions of the heart, and impart elasticity and strength to the moral and physical powers. The citizen, like a boy let loose from school, rambles over the fields, ascends the hills, culls wild flowers, and is filled with admiration, pleasure, and cheerfulness.

* * * * * * *

If there is a scene on this earth calculated to strike the mind with reverential awe, and raise the soul from grovelling thoughts of self to the contemplation of the God of Nature, it is to stand on the *highest top* of the *highest mountain.* Never shall we forget the emotions produced on us by our visit to the summit of the Salt-Pond Mountain, in Giles county, some years ago, with a few friends. Our horizon was extended to 100 miles around, limited only by the azure arch of heaven, and presenting to the eye the most sublime spectacle which the human mind can conceive—

'It was a hill
Of Paradise the highest; from whose top
The hemisphere of earth, in clearest view
Stretched out to the amplest reach of prospect lay.
Not higher that hill, nor wider looking round,
Whereon, for different cause, the tempter set
Our second Adam, in the wilderness;
To show him all Earth's kingdoms and their glory.'

(Beautiful!)

Having conducted our readers to the summit of Warm Spring Mountain, where the air is pure and invigorating, and whence the comfortable hotel of Col. Fry may be seen through the stinted and shattered chestnuts; his olfactories seem already to snuff the gale, laden with the grateful perfume of the fragrant coffee, and his mouth perhaps waters for hot muffins and buckwheat cakes.—(Graphic!)

* * * * * * *

The society which frequents the Virginia Springs is for the most part the *élite* of the country. Saratoga and other northern watering-places being accessible by railroads to persons in every condition of life, and at trifling expense, the mass of visitors is of course composed of all sorts of people. The knowledge of this fact makes men distrustful of each other's standing, and shy and reserved. At the Virginia Springs, on the contrary, there is an entire feeling of equality, a relinquishment of formality, a republican simplicity of manners, a reciprocity of kind, courteous, but unpretending civility, and an easy, unaffected, social intercourse, that renders those places peculiarly agreeable. ('It seemed a paradise,' &c.)

* * * * * * *

Yet there are numerous instances of permanent and ardent friendship originating among those rural retreats, and even the wily Cupid not unfrequently speeds his arrows from the shade of some majestic oak. (Classical!)

* * * * * * *

When Menenius Agrippa quelled the turbulent passions of the Roman populace by repeating to them the beautiful fable of the stomach and members of the human body, he set forth, in bold relief, the advantages derived through the agency of that great reservoir, from which proceeds the elements of that vital current that swells the muscular arm of the patriot, and tinges with a modest blush the maiden's cheek; but if it had equally suited his purpose, he might have depicted, with no less truthfulness, the wan cheek, the tottering step, the sunken eye, the palsied tongue, produced by pampering it to repletion. (Eloquent apostrophe!)

* * * * * * *

It is not the visible effect upon the excretions that is the most valuable in a mineral water, but that gentle, imperceptible influence which, without any apparent disturbance of the visceral functions, clears the jaundiced complexion, animates the languid eye, invigorates the enfeebled digestion, cheers the drooping spirits, moistens the hot, husky, acrid skin, imparts softness and volume and reduced quickness to the excited circulation, calms the agitated nerves, soothes the irritated mucous surfaces, gives motion and elasticity to the stiffened joints, and restores the constitution to health and youthful vigor with more certainty than could the fabled incantations of the Colchian sorceress. (Surely this man has in him the soul of a poet!)

But, alas! our brief space prohibits our proceeding further with this delightful volume. We cannot now quote the author's truly poetical apostrophe to the 'skin,'—we cannot dwell on the playful manner in which he deals with that 'inveterate little tippler,' as he styles him—the 'Roman Satirist,'—we cannot follow him to the hotels, and listen to his amusing description of the scrambling for dinner, and the 'shifting' for beds,—we must omit the record of miraculous cures performed by the agency of the 'wonder-working waters;'—but we cannot omit the expression of our wish that some competent writer would give us a good work on the mineral waters of the United States.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, July 30, 1842.

We have, in common with all who have any regard for the welfare of the community, been much interested in a communication made to the Common Council, by Dr. GRISCOM, the City Inspector, respecting a deficiency in the law regulating interments, which renders it impossible to make an accurate register of all the deaths which occur in the city. 'This register,' says Dr. GRISCOM, 'can only be made from the returns of the sextons, and these returns consist only of the burials within the precincts of the city. But all the interments not so made, of persons dying in the city, are unrecorded, and the weekly returns of the sextons fail to show the actual number of deaths, with the age, sex, disease, &c. Large numbers of persons dying in the city find their last resting places in the adjoining states of Connecticut and New Jersey; many are carried to Long Island, Richmond, Westchester and other Hudson river counties, while a few are removed to Massachusetts, Pennsylvania, and other distant states. These can be, and doubtless nearly all are, removed without any official notice of this department, as over them the department has no control, the law and penalty referring only to interments made in the city.'

It is thus quite evident that the design of the ordinance, respecting the discovery of death by violence, or any improper means, is entirely frustrated. Besides, as the Inspector observes, under the present law, it is impossible to form a true judgment of the mortality of the city—and as the safety of our citizens depends very much upon a knowledge of the state of health of the city, as at the commencement of epidemics and the frequent prevalence of small-pox and other contagious disorders requiring vigilance for their suppression on the part of the authorities and inhabitants, it becomes particularly important on this account that full returns of the deaths should be made to this department.

It is, we presume, altogether unnecessary to urge upon the city government, numerous additional considerations, which enforce the propriety and necessity of adopting the desired alteration in the important law to which public attention has thus been so faithfully directed by the City Inspector. The following concluding paragraphs of Dr. GRISCOM's communication, explain the mode which he suggests for effecting the requisite change in the law, and the prevention of the crying evils which may be perpetrated under its defective administration:—

'To obviate these manifest defects, I respectfully suggest the passage of an ordinance extending the obligations and penalties of sextons, contained in chapter 34, sections 4 and 7, of the Corporation Ordinances, to the owners and captains of steamboats, ferry boats, and sailing vessels, and the keepers of bridges, proprietors and conductors of rail-roads, and all other persons carriers from the city.

It may not be improper to add, that in the law of the State (Revised Laws, vol. 2, p. 437) prohibiting interments without the certificate of a physician or surgeon, the penalty attached to a transgression thereof is *only twenty-five dollars.*

It was doubtless an intention of that law to prevent the interment of a body without full assurance of the death having been caused by natural disease or unavoidable accident, and as it appears to the undersigned that this wise intention of a salutary law is annulled in a great degree by the smallness of the penalty, I have deemed it proper to call the attention of the Common Council to the subject. The way remains open for the concealment of a criminal act ending in death, and we know not how many instances of gross malpractice may not have been covered up, by the payment of twenty-five dollars to a sexton, a sum which the Restells and Jacksons of the day would consider an easy method of escaping detection.'

We have no doubt that decisive and effective action, on this most important business, will speedily follow on the part of the Common Council.

THE MEDICO-CHIRURGICAL REPORTER.

SCIRRHUS OF THE PAROTID GLAND SUCCESSFULLY TREATED BY TYING THE COMMON CAROTID ARTERY.

With Cases.

BY ALEXANDER E. HOSACK, M. D.

[*Written for the Lancet.*] for plate
sup 177

The operation of placing a ligature around an artery, either for the cure of aneurism or the arresting of hæmorrhage, has of late years become of so frequent occurrence, that the necessity of reporting such cases to the profession through the medium of journals, is scarcely any longer felt. It is only when some untoward circumstance is connected with the case, that it is deemed of sufficient interest to claim the notice of the medical public.

Many years since I suggested, in the presence of several of our most eminent practitioners, the operation of taking up the common carotid artery with a view to the cure of a fungoid affection of the parotid gland; but the patient did not yield her assent, and in the course of time died of the disease. Since that, however, I have operated in two instances wherein a disease of the parotid gland existed, one of them a scirrhus, the other a fungoid tumor consequent upon an attempt to extirpate the parotid gland when affected with scirrhus. The first instance was entirely successful, the other partially so.

The successful case alluded to, occurred in a Mrs. Mary Raywood, aged fifty-five years; a patient of my friend Dr. Graham, by whose advice she was placed under my care. She had been affected with scirrhus of the right parotid gland between three and four years. Its growth had been gradual; the first inconvenience which she experienced, was that of a restriction upon the motion of the jaw, which continued to increase with the growth of the disease, until she was unable to open her mouth further than to admit the smallest size teaspoon. The tumor had at this time attained to a considerable size, protruding from behind through the space posterior to the angle of the jaw occupied by the parotid, extending itself over the masseter muscle quite up to the zigoma, carrying before it the lobe of the ear, and encroaching so much upon the external meatus as to close it entirely. Upon inquiry she informed me that she had been a patient at the New York Hospital for the space of two months, and while there the surgeon had kept her constantly under the use of iodine both externally and internally, but without the least benefit; and finding the sight of the right eye becoming seriously affected, as she supposed, from the use of the above medicine, she requested to be discharged. She also remarked, that since leaving the hospital, which was about two years ago, the tumor continued steadily to increase.

Having fully satisfied myself of the true nature of the complaint, I proposed tying the common carotid of the side affected, assuring her that I fully believed it would cure the disease; whereupon she immediately assented to the operation, which was performed upon the 21st day of May, 1829, in the presence of my friends Dr. Wilkes, Dr. Mason Warren of Boston, Dr. Foster, and several gentlemen of the profession. The taking up of the artery caused the patient little or no inconvenience; the wound healed in the usual time with the exception of that part occupied by the ligature, which came away on the thirty-fifth day.* A perceptible diminution of the tumor was observed in the course of a month after the operation, which continued gradually to decrease until the disease wholly disappeared. She is now enabled to open the mouth to its full extent, and masticates her food without the least difficulty. Recurring to the plate, figure 2, it will be observed that not only has the tumor been entirely absorbed, but a depression actually exists, in form precisely like that of the gland in its natural state, thereby showing its complete removal, together with that of the disease.

[To our great regret the artist was unable to make an accurate and sufficiently illustrative engraving from the daguerreotype portrait of this patient, which was kindly placed at our disposal by Dr. Hosack. We may, however, state that the appearance of the woman's cheek, affords apparent proof of the extirpation of the gland.—Ed. L.]

Case II.—The second case in which I tied the carotid artery with a view to the removal of a tumor of the parotid by absorption, was that of a Mr. M——, operated upon June 12th, 1840, in the presence of Drs. Wilkes, Graham, M. Post, Foster, Carnochan, and several students of medicine. Although I regret to state that it has not been attended with the same favorable result as in the foregoing instance, yet it is not the less deserving of notice. The patient has been comparatively free from pain since the operation, and the tumor has not increased; so far he has derived benefit: but I am not encouraged to believe it will be entirely dispersed. I suggested to him the propriety of having the carotid of the opposite side taken up in the event of the tumor continuing to grow. This gentleman is the only survivor of four patients operated upon by the late Dr. Bushe for the removal of that gland. I mention the fact to show the liability of the disease to return, or of a fungoid growth to supervene upon an unsuccessful attempt to remove the parotid gland when affected with scirrhus; and as these cases were all published as successful, it is but justice to the profession that the result should be made known. Surgeons generally are too apt to publish their operations to the world before a sufficient time has elapsed to determine their success. It is not only unfair to the profession, but in every sense unwarrantable, and must tend finally to bring surgery into disrepute.

When the operation of taking up the femoral artery for the cure of popliteal aneurism was first projected and practised by Mr. Hunter, much fear was entertained from hæmorrhage upon the separation of the ligature; but that apprehension has been completely put to rest by subsequent experience. The mere operation of placing a ligature upon the trunks of vessels being no longer regarded as one of danger or difficulty, surgeons have been induced to resort to it in the treatment of injuries, and in arresting the progress of disease. In the fourth volume of the 'American Medical and Philosophical Register,' published in 1814, a case is related by Dr. Henry U. Onderdonk (now the learned Bishop of Pennsylvania), wherein he tied the femoral artery in an extensive injury of the knee-joint; the operation he states being done with a two-fold object, that of staying the flow of blood and guarding against the disastrous consequences of inflammation. It was attended with the happiest effect. Since that period it has been repeatedly performed in the United States, with the same intention, and almost always with the same favorable termination. Encouraged by these results, surgeons have been induced to advance a step further, and intercept the force of circulation by tying the main artery preparatory to any important operation upon a highly organized structure, as the head and neck*—not only is the flow of blood thereby greatly lessened at the time, but inflammation and consequently extensive suppuration are prevented—thus affording a better chance for the recovery of the patient.

Several instances are also recorded where eminent surgeons have resorted to the operation of tying the common carotid artery in fungoid tumors of the neck, where extirpation was deemed impracticable;† but in all the cases so published, the operation was performed at an advanced period of the disease, and with the avowed object of prolonging the life of the unhappy sufferer for a few days only. But in no instance have I been enabled to learn wherein the common carotid artery has been tied with the view of the removal of indurated tumors or scirrhus of the parotid gland by absorption. The case, therefore, of Mrs. Mary Raywood, described in the beginning of this paper, is the first and only successful one on record. How far it is worthy of imitation, must remain for future experience to determine. The extirpation of the parotid gland for scirrhus, is an operation which merits the most profound attention; and before it is resorted to, the surgeon should weigh well all the circumstances connected with it. It is not only very difficult and dangerous in the extreme, but the disease is liable to return. Indeed, I may say, that out of many cases wherein the operation has been performed, a very large proportion, if not the greater part of them, have proved unsuccessful from the re-appearance of the disease. Hence we may infer, that in those instances in which the disease has returned, that the gland has not been wholly extirpated.

I will now conclude my remarks, by briefly stating the reasons which have particularly induced me to resort to the operation of securing the carotid artery for the cure of this formidable complaint.

1st. The highly organized structure of all scirrhus tumors, as well as the cellular tissue by which they are surrounded.

2d. From the continued action of the absorbent vessels upon diseased, as well as sound structure, and also their susceptibility to increased action from known medicines.

3d. The uniform success attending the operation of taking up the carotid artery, so far as the mere operation alone is concerned.

4th. The liability of the disease to return after the extirpation has been resorted to, as well as the great danger and difficulty attending the operation.

[WRITTEN FOR THE LANCET.]

A few Remarks on a peculiar form of Syphilis.

BY JAMES E. WARD,

Assistant Surgeon to the Hospital Retreat.

Of all the varieties of syphilis mentioned by authors, none, as far as I know, have noticed a peculiar train of symptoms which takes place in some subjects who have labored under secondary syphilis for a length of time, which symptoms, when present, always prognosticate dissolution, as far as my observations have extended. A few months subsequent to my connection with the hospital, my attention was called to a case by Dr. Boardman, of the character I am about describing. The doctor remarked that he had seen several cases of the same nature which invariably terminated in death. This case struck me very forcibly on account of its fatality, novel character, and its not being mentioned by writers, as far as my reading had informed me. Since this case has happened up to the present time, I have had the opportunity of witnessing several, which cases I have paid particular attention to. All the patients that I have seen laboring under this peculiar form of syphilis, have always manifested a certain train of symptoms which, when taken collectively, demoustrates the affection so well that when once seen it can be recognized after without difficulty. I shall in the first place attempt to describe the symptoms; in the second, the post-mortem appearances on dissection; in the third and last place, a brief history of some cases. Some of the symptoms I am about to portray are common to patients whose constitutions have been worn out by repeated attacks of fever, or by chronic disease; but there is one symptom that attends this disease that is not seen in other affections. I allude to the peculiar color of the skin, which I will endeavor to describe. The most prominent symptoms that present to our notice, is a peculiar chalky, slightly tinged with yellow, appearance of the skin, resembling parchment of a yellow cast, as if the system had been deprived of its oxygenated blood. The second symptom is, the singular appearance of the tongue; this organ has the color and appearance of macerating cartilage of a white slightly tinged with gray. Wakefulness is another symptom that attends the disease through its course; great aversion to food of all kinds, the patient loathing the very odor or sight of it, is a very common symptom. Epistaxis is of ordinary occurrence, frequently supervening several times in twenty-four hours. The pulse is generally small, quick and feeble. Diarrhœa—this symptom has attended all the cases I have witnessed; the stools were of a light clay color. Post-mortem appearances on dissection—all the dissections that have been made of those subjects that have died of this affection in this hospital, their appearances on examination have been generally the same. The peculiar appearance of the tongue that has been described, is not confined to that organ, for on examination of the intestinal canal, we will find the whole mucous membrane, from the tongue to the anus, of a white color, slightly tinger with gray, resembling macerating cartilage. The lungs, heart, intestines, liver, kidneys, in short, every organ of the body, has the same appearance as the tongue, except their color being a shade or two darker. The above were the appearances displayed on dissection. To give a more correct idea of this disease, I shall add a brief history of a few cases. Case 1.—Samuel Hadley, seaman, æt. 26, born in New Hampshire. This man was admitted in the Hospital July 9th, 1839, for secondary syphilis, having a large syphilitic ulcer on the pubis, with eruption on the whole body, and sore throat; he was treated by a physician in New York, who salivated him, and kept his mouth sore for two weeks; his general health much improved by dieting. The following treatment he received in the Hospital:—Syr. sarsaparilla two ounces daily, with cinchona and a nutricious diet; applied to the ulcer lotio. arg. nit. gr. x. to aq. font ℥i. Under this treatment his sores healed; a few weeks subsequently his sores broke out again; we then gave him the 1-8 of a grain of oxymuriate of mercury and syr. sarsaparilla daily, after continuing the mercury for nine days, which produced ptyalism. His sores healed; about two months previous to his death, that peculiar color of the skin was noticed; the tongue exhibited a white grayish appearance; pulse one hundred, small and quick, subsequently he became desponding, refusing food from time to time; epistaxis frequently supervening with diarrhœa; he sank gradually, and expired April 9th, 1840. Autopsy eighteen hours after death:—We found the whole abdominal viscera morbidly soft; their color were of a grayish white, resembling washed muscle or muscle deprived of its coloring principle. The mucous membrane of the stomach and bowels had the same appearance of the tongue, which has been described. Case 2.—Thomas Curney, æt. 36, seaman, born in Delaware, was admitted in the Hospital Nov. 14th, 1839, for secondary syphilis, having ulceration on his body and limbs of eighteen months duration, the ulcers covered with incrustations; eighteen months since had the primary disease in the form of chancres and bubo, for which he was salivated and took syr. sarsaparilla. Treatment received in the Hospital:—Applied flaxseed poultices to the sores to remove the incrustations; then dressed them with ung. hyd. rub.; took syr. sarsaparilla and soup diet; the sores healed. Two or three weeks subsequently his sores broke out again; we then gave him the oxymuriate of mercury, the 1-8 of a grain daily. The sores healed while under the influence of the mercury. Three or four weeks previous to his death, his skin took on that singular color, at the same time all the symptoms that have been described made their appearance; he continued getting from bad to worse, till he expired March, 1840. Autopsy twenty hours after death:—We found the organs precisely as the preceding case.

---

* The usual time being prolonged in consequence of the absorbents acting with less vigor in so advanced a period of life.

† See 'Medical and Surgical Register of the New York Hospital,' where the carotid artery was tied by Dr. Mott, preparatory to the removal of a tumor of the neck in 1818; and also 'Journal of Medical and Physical Sciences,' Philadelphia—Cases of Osteo Sarcoma of the Lower-jaw, 1818.

† See 'London Lancet,' vol. II. A case by Dr. Fricke, of Hamburg, in 1826.

Remarks.—As to the question whether mercury or syphilis, or a combination of both, creates this affection, I would answer that it entirely originates from syphilis, for I have seen cases where the patient had not taken a particle of the mineral. In respect to the treatment pursued, we generally resorted to tonics, such as the carb. iron, cinchonæ infus., serpentaria; and in the last stage of the disease, we administered stimulants.

Strychnine in Chorea. By M. Foulhieux.

M. Foulhieux, of the Hotel Dieu de Lyons, gives the following very interesting case of chorea, treated with strychnia:—

The patient, a boy aged thirteen years, at his entry into the hospital, July 10th, 1838, presented the symptoms of a very intense chorea, which had supervened six weeks previously. A dread of being beat by his schoolmaster was thought by his father to have induced the disease, which came on suddenly, and without any gradation of the phenomena. The limbs were so affected with irregular movements, as to render it almost impossible for the patient to walk, or bear his food to his mouth: his speech was always difficult, and often completely impeded. Sleep procured a complete cessation of all these symptoms.

Up to Jan. 26th, 1839, he was treated with the ordinary remedies—purgatives, valerian, assafœtida, &c. 'On this day, Jan. 26th, I had recourse to pills prepared with a twelfth part of a grain of strychnia, one given each night and morning. The two first days the strychnia produced no appreciable effects. The day following there was a gradual exacerbation of all the symptoms of the disease, and the development of a furfuraceous eruption over the whole body. During the night of the 28th and 29th the patient had violent muscular contractions, which twice precipitated him from his bed, and greatly alarmed his attendants. In the morning these contractions still continued, but became less strong. The strychnia was then intermitted, and a simple sedative potion administered. The 30th Jan., not only the yesterday's convulsions had ceased, but the movements of the chorea were singularly diminished. They gradually lessened till Feb. 4th, when they no longer existed. The patient was kept in the hospital till March 5th for a rheumatic affection of the wrist, which came on without any apparent cause.'

[It is very evident from the short period which elapsed before the cure of the disease (which was of some standing), after the administration of the strychnia, that it must have had a considerable effect; but it is worthy of consideration, how far the eruption assisted in the cure, and if this was in any way induced by the remedy. The treatment of chorea by strychnia would be plainly contraindicated if it co-existed with any chlorotic or inflammatory affection, and would be less likely to prove efficacious if the disease were of any standing.—*Gazette Medicale.*]

Diagnosis of Ascites and Ovarian Dropsy by Percussion.

Dr. Watson, in his lectures, points out the manner of distinguishing these affections by percussion.

In true ascites the relative place of the liquid and of the intestines is determined by the posture of the patient. The bowels, which always contain some gas, float to the upper part of the liquid, and there give out (when the finger, as a pleximeter, is applied to the corresponding surface, and struck) their peculiar resonance. Mediate percussion will thus follow the gravitating fluid, and discover always a dull sound in the lowermost and a hollow sound in the uppermost part of the abdomen.

But it is not so in ovarian dropsy. The cyst, in a diseased and enlarging ovary, rises in front of the intestines, which, being tied down by the mesentery, cannot embrace the tumor so as to reach its anterior aspect, but are in fact pressed back by it towards the spine. Hence, if there be any resonance produced by percussion, it is in one, or the other, or in both, of the flanks: and the umbilical region yields a dull sound whatever the position of the patient may be. The same is true of the enlarging womb in pregnancy.

This simple expedient, then, is quite decisive. In ascites the epigastric or umbilical region is tympanitic on percussion; in ovarian dropsy it is dull. To be quite sure it is well to make the patient assume different postures in succession. If the person affected with ascites turns upon her side, the uppermost flank will become resonant; the umbilical region dull: whereas in ovarian dropsy, the sounds remain severally where they were under every change of position.

Dr. Watson alludes to three exceptional cases:—

1. The distension, in true ascites, may be *so* great, that the mesentery shall not be broad enough to allow the buoyant intestine to reach the surface, when the patient is supine. Dr. W. has seen such a case.

2. The intestines may be tied down, and so prevented from ascending, by their specific lightness, to the upper part of the surrounding liquid. And this may happen, either in consequence of the adhesion of the various coils of the intestines to each other, and to the parts behind them; which is not an uncommon occurrence:—or the intestines, though unadherent, may be swathed, as it were, and bandaged down, by a thickened and diseased omentum.

3. Dr. W. once knew an ovarian cyst to exist, when the umbilical region was tympanitic under percussion. The case furnished just that kind of exception which serves to prove a rule. This was also a hospital patient. Her *history* was the history of ovarian dropsy. Some time previously she had discovered a small tumor in one of the iliac regions. It increased without much disturbance of her general health, until it became very inconvenient from its bulk. She was then tapped in one of the Borough hospitals: and she stated distinctly that it was not a clear watery fluid that was evacuated; but a glutinous, mixed, and grumous matter: such as belongs to ovarian disease. No doubt could be entertained that the enlargement of the abdomen resulted from disease of that kind. Yet the umbilical region, when percussed, always rendered a hollow sound. Upon the death of the patient the mystery was solved. Air hissed forth from the opening made by the scalpel through the abdominal parietes: and the source of it being traced, an ovarian cyst, of considerable magnitude, was found adhering to the peritoneum in front of the belly, and containing no liquid, but some yellowish shreds only; the remains, apparently, of some smaller included cysts. This ovarian bag had been filled with air, and had given occasion to the equivocal sounds.

Dr. Watson alludes to the possibility of confounding a much distended bladder with ascites. John Hunter once made this mistake, and operated.—*Med. Chir. Rev.*

THE COLLATERAL SCIENCES.

M. Foville on the Anatomy of the Brain.

This very important paper is contained in the last volume of the *Memoires de l'Academie Royale de Médicine* The author states that his researches carry out in the brain the theory which Charles Bell has established respecting the spinal marrow, viz. the existence of different orders of roots of the spinal nerves, and of the bundles of the spinal marrow whence they arise. At first sight, the difficulty attending the investigation as regards the spine would seem to be increased when it became extended to the brain; but in this latter we are at least certain that the optic and olfactory nerves are exclusively sensorial, in spite of all that has been of late said concerning the influence exerted by the fifth pair upon the organs these supply.

'If, then, I can demonstrate that there exists between the optic and olfactory nerves and the brain, cords and planes of nervous matter, combined with this organ in regions, perfectly distinct from those fibres, which, proceeding from the anterior pyramids, spread into the cortical substance of the convolutions, I shall have shown the anatomical disposition of that, which pathology has already taught us, viz. the distinct routes by the medium of which the brain influences the muscles, and those by which the impressions derived from the organs of the senses reach it.'

To give an abridgement of this demonstration would render it unintelligible, so that, not having sufficient space at command, we can only glance at some of the author's conclusions.

'Thus, the corpus callosum is a large commissure of the encephalic prolongations of the posterior bundles of the spinal marrow, and the plane of the hemisphere is the uninterrupted prolongation of the anterior bundles of the spinal marrow.

The anterior commissure unites, from one side to another of the brain, those parts which are at once continuous with the posterior bundles of the spinal marrow, and with the sensorial nerves of the brain. The auditory nerve also, although arising in so remote a part of the brain, may be traced into those parts of the organ we have been describing.

On the other hand, the fibrous planes of the hemispheres, emanating from the anterior pyramid of the spinal marrow, proceed to the internal surface of the cortical substance, without any communication by means of commissures uniting the fibrous planes of the one hemisphere with those of the other. Moreover the order of parts spring from the posterior portion of the spinal marrow, present in their course grayish swellings which most anatomists regard as ganglions, with which they are in connection, and from which they receive numerous fibres: but the other order of parts traversing the circle formed by the first and their ganglions, are never brought into direct relation with these ganglions.

I draw the following physiological corollaries:—

1. The fibrous parts of the brain seem to be simple conductors, the cortical substance of the convolutions in which these terminate being the essentially active portion.
2. The fibrous portions, intermediate between the convolutions and the anterior pyramids, are devoted to the transmission of the influence which determines voluntary movements. 3. The fibrous portions, communicating between the sensorial nerves and the cortical substance, and in whose course ganglionic swellings are found, transmit the sensorial impressions to the brain.

It is lesion of the cortical substance that is usually observed in changes of the brain produced by insanity. The atrophy of the convolutions, and the substance of the brain, so frequently seen in dementia, seem to result from the abolition of the functions of the gray portion—the fibrous substance in connection with it thence becomes atrophied, as do the optic nerves in the blind. Pathological anatomy presents many examples of lesions of the portions of the brain intermediate between the convolutious and anterior pyramids, of which the cross paralysis of the active organs of motion is a frequent consequence. The fibrous substance intermediate between the convolutions and the organs of the senses is less frequently affected pathologically:—the existence of so many commissures render the abolition of the transmission of the impressions difficult to effect, for, by means of these, each sensorial nerve is in relation with each hemisphere, while each motor nerve is connected with but one.

Comparative anatomy teaches us that in brutes the intermediate portions between the senses and the brain, become developed in proportion to the activity of the organs of sight and smell; while those parts, the lesions whereof in man are attended with intellectual disorder, or muscular paralysis, are found to be in animals proportionally feeble to their slight manifestations of the functions supposed to depend upon them.'

The author terminates his paper by observations on the relative form of the cranium to that of the brain; and endeavors to prove that the various frontal, occipital, and parietal protuberances depend upon the formation of the ventricle.

'The form of the brain and the form of the cranium are alike determined by the form of the proper serous sacs of the hemispheres, constantly filled with their natural fluid.'

ITEMS AND INTELLIGENCE.

Medicine and Surgery in Quebec.

Perhaps there are no practitioners in the British American Provinces better educated for the several departments of professional life to which they are devoted, than those of the city of Quebec. Those who are most distinguished are natives of Scotland, England, or France, where they had all the advantages of elevated scientific instruction in early life. A few only residing within the walls, who are engaged in practice, were born in Lower Canada. There are several, a younger class of aspirants, in the suburbs, who acquired their profession in the States.

A medical school exists at Quebec, which is confided to the care of able men, such as Dr. James Douglass, Dr. Morrin, and some others, who are well known. Of the number in attendance on the lectures, ordinarily, we have not ascertained. This much, however, is certain, that the college is considered to be firmly established, and constantly gaining in character and in public esteem.

The Hotel Dieu, established in 1636, by the Duchess d'Aiguillon and Cardinal Richelieu, is the oldest hospital, probably, on the American continent. The *Sœurs de Charité* have the entire management of its finances, and elect the medical officers. The patients increase or diminish just in proportion to the value of the rents of the buildings belonging to the nuns. If many of their houses are vacated, or unusual repairs are required to keep the property tenantable, then they have less money to bestow in charity. They are admirable economists—since they never owe a farthing; now do they allow any money to accumulate on their hands. At the close of a year the institution is always free from debt. The nuns, too, decide upon admissions and grant discharges, influenced, however, in either case, by the advice of the medical attendants, whose services are gratuitous. The Hotel Dieu, as a specimen of ancient architecture, is a rare curiosity. Its interior is no less rare than its exterior. Extreme neatness, comfort, order, and unceasing kindness towards the sick, characterise this unpretending charity.

The Marine Hospital is of recent origin—a noble stone structure without the walls, at the mouth of Charles river, and not yet completed.

At Grosse Island, 27 miles below Quebec, there is another hospital, which takes cognizance of all diseases brought in from sea. At the present time, owing to the immense rush of Irish emigrants, many of whom arrive in a feeble condition, the effects of a long and tedious voyage, two hundred patients, principally with fevers, are in this hospital. Dr. G. M. Douglass, the attending physician, is constantly occupied, therefore, with the duties of his office.

Although the cities of Lower Canada are abundantly supplied with an industrious, learned body of physicians, the country towns are wofully neglected. There is not a single practitioner for fifteen or twenty miles to the north and west of Quebec. Beauport, a thriving agricultural town, four miles distant; Charlevois, seven miles; and Lorette, nine miles—delightful residences, commanding unrivalled and extensive scenery, with excellent macadamized roads to the city—have neither of them either a physician or druggist, and the people are obliged to send to Quebec for medical advice and assistance. Yet, from a general examination of those other towns equally destitute, we see no reason why a physician would not succeed to his entire satisfaction in either of them.—*Boston Med. and Surg. Jour.*

Medicine and Surgery in Montreal.

Although there are hospitals in Montreal, with many patients in them, it is a singular fact that operations are very rare. In passing through the spacious and well-ventilated wards of any one of the charitable institutions of the city, which are principally under the immediate control of the different orders of nuns, no one is seen, at least at present, either recovering from a surgical operation, or preparing for one. Infirm and idiotic men and women, and old and white-headed people, tottering under the weight of years, make up the amount of beneficiaries. There seems to be no specific regulations in regard to the period when a patient shall leave, nor special inquiry into the claims of an applicant for admission. We saw a pale, feeble Irishman, sitting near a door, who said, when questioned about his health, that he had been 'seven years with a great weakness in the legs!'

A student would not be essentially benefitted by attendance either at the Hotel Dieu, under the surgical care of Dr. Monroe, or at the General or English Hospital, as it is called. This latter establishment has a charter from England, and derives considerable of its support from a small tax on emigrants. There are, however, many annual subscribers, by whom the medical officers are selected, but who received no compensation. Professional merit has no influence in the appointments: because an individual happens to be well esteemed by those exercising the most influence, he takes the post—to have and to hold as long as he lives, for aught we know to the contrary. Of the military hospitals, of which there are a number, each is under the care of the surgeons attached to the regiments on garrison duty. Consequently they are frequently changed.

As nearly as can be ascertained without a special call for numbers, there are not far from fifty practitioners in Montreal, out of which a few perform the most lucrative part of the business. Dr. Holmes is spoken of by the inhabitants generally as a man of superior professional attainments. Singular as it may appear to us, in the States, where quackery in all its varieties flourishes like a green bay tree, there is not one of the family of quacks in the whole city—not even a Thomsonian or a reformed Beachite; nor is there a bottle of hot drop, or, as far as we could discover, a spoonful of composition tea, within the limits of the municipality. The poor man's plaster is indeed on sale; but no mention was made of Sherman's lozenges or Brandreth's pills. More wonderful still, the Science of

Life, as promulgated among us from the pulpit, instead of a college of medicine, by one of the greatest quacks in the Union, if ever known in Lower Canada, has not been long remembered—since they are prodigious meat-eaters in all British America, even to a proverb, yet are as hardy, strong, long-lived and happy as the disciples of any new school of dietetics.

Till within a few years, the city practitioners of Lower Canada went to England for a medical education. Those whose means are sufficiently ample, do so still; but since the discovery was made that lectures at Boston, New York and Philadelphia were open to them, the number now annually matriculated at these places, is increasing. When a physician goes from the States into Canada to establish himself, a diploma, from any school of acknowledged reputation, is a sufficient document to obtain the approbation and license of the board of medical examiners, appointed by Government.

A collegiate institution, called M'Gill College, the academic department of which was never organized, has a medical school in active operation, with a talented faculty. There are six chairs, filled by the following gentlemen, viz:—Practice of Physic, W. Robertson, M. D.; Chemistry and Pharmacy, A. F. Holmes, M. D.; Principles and Practice of Surgery, G. W. Campbell, M. D.; Midwifery, A. Hall, M. D.; Anatomy and Physiology, —— Bruncan, Esq.; Demonstrator of Anatomy, J. R. Dick, M. D. Lectures commence the first Monday in November, and continue till May first. Three winter sessions are requisite for graduation.

A stranger is every where struck with the devoted attention and unwearied kindness of the sisters of charity. They are the hospital nurses, the apothecaries in some places, but always the vigilant, conscientious attendants of those admitted to their hospitable abode. Much of the success in hospital practice depends on the nurses, since they often really kill or cure, however skilful the medical attendant may be.—*Boston Med. and Surg. Jour.*

Abstinence or Temperance?

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

I have read with pleasure the various articles in your valuable journal, which I have taken from its commencement, and wish you the utmost success in your endeavors to elicit and disseminate sound medical knowledge, and to promote the best interests of man in his threefold capacity of a physical, intellectual, and moral being.

I noticed lately an article from the 'London Lancet,' headed 'Abstinence and Temperance.' It is written with much fairness and candor, and yet the tenor of it, as I understand it, is clearly against entire abstinence from the use of wine and intoxicating drinks by those in health.

Permit me to say that I suppose it will be conceded that the greatest glory of the physician is to prevent disease—next to that, to cure it. Now, upon the great whole, would man be benefitted or not by the exclusion of wine and intoxicating drinks as a beverage in health? Would the amount of disease be more or less? I would recommend that the diet should be good and generous. Our early ancestors were a hardy race of men, and yet they did not use alcoholic drinks. I know many aged persons who are in sound health, and yet for a long period past have not tasted at any time of wine or intoxicating drinks in any form.

One of the strongest young men I ever knew lived for many years on bread and milk. He was a farmer. The plan of abstinence has not been fairly tried in this country or Great Britain for a course of years, or to so considerable extent, as to test it thoroughly. We have not yet ascertained that a race of men may be produced under this plan in temperate climates, or scarcely in any climate, if we include opium, &c. &c. under the general head of unnatural stimulants, if I may so say.

As it regards the prevalence of scrofula and phthisis,—making 1·5 or nearly 30 of all the diseases that destroy man in the United States and Great Britain, it may not be improper to say that they exist among a people, and the hereditary predisposition is transmitted from parents who use wine and other stimulants, and we could hardly fear a greater prevalence of these diseases provided there were a change in the habits of the people.

I am fully of opinion, as I said before, that a good, generous diet ought generally to be used.

The ultimate object of receiving substances into the stomach is, of course, to furnish nutriment to the system, and this by filling the blood vessels with good blood, so as to keep up the equal action of the system throughout, but not to hurry on the circulation by any very considerable excitement; and so far as the sense of taste is concerned, there are many beverages more agreeable than alcoholic or vinous ones, as tea, coffee, sherbert, lemonade, eau sacrée, &c. &c. and cold water.

I believe that a sufficiency of good food, together with the use of the above beverages, would generally keep the human system in a more healthy condition than the habitual use of any quantity, more or less, of wine, &c. &c. would do.

As it respects scrofula—I will not go into an enumeration of the causes, as improper food, deficient clothing, (how much of this privation is produced by intemperance?) eruptive diseases, &c. &c. &c. It, however, would seem to afflict all classes almost indiscriminately. There is some difference of opinion about the proximate cause or pathological condition of the system, but perhaps the better opinions now are that at least considerable attention should be paid to the digestive apparatus, and that scrofulous injuries of the eyes, nose, &c. are preceded by disturbance of the stomach and bowels. Almost all parts of the system are liable to this disease, as the brain, lungs, muscles, heart, liver, kidneys, bones, &c. &c. As to the treatment of scrofula—no doubt the tonic plan is, upon the whole, the grand mode of curing scrofula, although it is often necessary to precede it by alteratives, &c. I shall not trespass upon your time by going into a detail of the different remedies used. Tonics strictly, not stimulants, seem to be relied upon, and although wine is no doubt many times strictly a tonic, I do not discover that any considerable reliance is placed upon this agent as a cure for scrofula. No doubt an occasional use of wine, when there is languor or atony, is useful. In families predisposed to scrofula, the mother is advised, in many instances, to abstain from full diet during utero-gestation.

In respect to phthisis pulmonalis—the secretions are diseased; the too rich blood often produces plethora and inflammation; the secretions must be changed—irritation and inflammation subdued—warm clothing—well ventilated rooms—plain, nutritious diet. Wine is not employed to any great extent as a remedy in this disease.

Now, sir, I argue that wine and alcoholic articles are valuable as remedies, though perhaps overrated and too often employed, and frequently productive of evil consequences, as Tweedie says.

To persons of sedentary habits the use of these stimulants is undoubtedly injurious. As it respects the intellect, the 'Medico-Chirurgical Review,' in reviewing an article or work on Physiology and Hygien, says,—'Wine and all other stimuli, though they may for a while give increased energy to the intellect, ultimately depress and weaken it.' Abstinence from intoxicating drinks cures many diseases, as eruptive diseases of certain kinds, and others. Sir Henry Halford recommends to the English people that they should, at some period of their lives, try the plan of absti nence from wine. Give it a fair trial, and if it does not agree with them, they have the remedy within their reach. There are enjoyments enough in the world without intoxicating drinks. Let abstinence be fairly tried, and it will not be found so full of thorns and briers as some suppose it is.

Very respectfully yours,
HENRY HOLMES, M.D.

Hartford, July 20th, 1842.

[We transferred to our columns, a few weeks ago, the remarks on Abstinence and Temperance, by Dr. CLUTTERBUCK, of London, on which our esteemed correspondent so calmly animadverts, because we regarded them as presenting a not unnecessary reproof of the extravagant and injudicious zeal of some friends of the great and good cause of temperance. But we did not by any means desire to be understood as committed to all the views and statements of Dr. CLUTTERBUCK. And we don't suppose that any of our readers hold us so committed. We like to see temperance advocated in a *temperate* manner; and honestly believe that the fierce denunciations of wine and other stimulating liquors as 'unnatural,' and injurious when used in any quantity or in any circumstances, which are so often uttered at Temperance meetings and in Temperance publications, have impeded rather than advanced the progress of the cause. With these remarks we very cheerfully give insertion to Dr. HOLMES' communication.—ED. L.]

Medical Education.

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

I received, a few weeks ago, from whom I know not, the 'Annual Announcement of Lectures' issued by the Faculty of the University of New York, and upon glancing my eye over it I discovered a certain paragraph which I thought merited and would receive from your hands just such a notice as appears in the *Lancet* last come to hand. A 'young man' but 'recently from Ireland,' forsooth! And are gray hairs, only, a proof of wisdom? Are none but natives permitted to teach in our States? How detestable is this monopolizing spirit! How inexcusable in members of a learned profession—born and educated too in 'a land which is as well designed for the hospitable abode of foreigners, as for its own citizens!!' If I had not been a reader of the *Lancet*, the appeal of the Faculty to American prejudice, and their omission of all evidence against you would have led me, at once, to suspect that, there is 'something rotten in Denmark.' Wealth and station may, for a time, sustain these men; but they must change their course, or 'fall where' they 'would mount.'

But, if *your* plan should be carried out, would not many young men be deterred from entering our profession for want of the necessary funds? You are aware, I suppose, that there are in this country hundreds of parents who would not consent to have their sons taught any where for a less sum than that which is paid by others, but who could not afford to continue their sons, perhaps not one, so long as you propose in a city, and a university. What then would be done with the sons of such? But if the parents of any meritorious youth in the land had the means of continuing their sons at a medical college for the period proposed, would as much good really result as is anticipated? Cannot all be taught that need be taught, in every branch of our profession, by *competent* professors, in four months? Would not young men of industry and of respectable talents, by two or three years study at home, under a good teacher, be able fully to appreciate all the lectures of any Medical Faculty? And would not two terms of this duration be sufficient for all such young men? I have thought so. I have known young men of superior minds, who had *attended* the lectures in Philadelphia for three winters and one summer, to be rejected on coming forward for a degree, whilst others of inferior minds, who studied at home and had the benefit of but two courses, passed with credit! The truth is, no time is sufficient for an idler, and we would have fewer of these if it were considered a disgrace for a young man not to 'pass' after two terms of four months each and two or three years of previous study. Besides, all will agree that there are many and great objections to keeping youths raised in the country long in the cities, and especially when not fully occupied. To lose one's money and have a child's health and morals ruined, is a serious matter. And the danger of this by continuing a youth so long as you propose in a city, is so great that *I* would not risk it for all that could be gained. By far the greater number of those who come home crippled and ruined are 'summer-course' students.

But I would be understood: in supposing eight months' attendance upon the lectures and at the hospitals sufficient for industrious and qualified youths, I take it for granted that the professors will do *their* duty. I would allow no time for displays of old, useless instruments; silly anecdote; pedantry; self-adulation; unnecessary criticism, &c. &c. Professors who *cheat* young men in this way of their time and money, or who rob able and industrious authors of their laurels, should be sent to Sing Sing.

[The above remarks and suggestions on the great subjent of medical education, were received by us in a private letter, from a highly intelligent and respectable practitioner in Virginia, and deeming them of sufficient importance we have published them, but do not feel at liberty to append the writer's name. The force and propriety of the concluding observations will be felt and admitted in very many quarters.—ED. L.]

Fees at Coroner's Inqnests.

We have been informed by our worthy and efficient Coroner, Dr. ARCHER, that no fee is allowed by law to medical witnesses at Coroner's Inquests in this city and county; and we are anxious to give immediate circulation to this information, in order to remove the erroneous impression under which some now labor on this subject, and which seemed to be confirmed by the letter to the Coroner of Kings County, which we published a week or two since. In our next we will probably have a communication relative to this matter from Dr. ARCHER himself—who is, we may add, the most efficient Coroner we have ever had in this city.

Salt Water Baths.

We lately visited the very commodious and well-conducted baths, under the superintendence of Mr. Thomas, at the Battery, and were much pleased with the admirable arrangement smade by him for the accommodation of all who desire to promote their health and comfort, by salt water bathing. Mr. Rabineau's 'Warm and Cold Salt Water Baths,' at the foot of Desbrosses street, are also fitted up with great taste and judgment, and are eminently worthy of patronage. It is of course unnecessary to say any thing here respecting the value of such baths, and we have only to remind our readers in this city that there is within their reach, such favorable opportunities of procuring for themselves and their patients, an enjoyment of the luxury which these establishments afford.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, AUGUST 6, 1842. No. 6.

DO THE VARIOUS RACES OF MAN CONSTITUTE A SINGLE SPECIES?*

BY SAMUEL FORRY, M. D., NEW YORK,
Author of 'The Climate of the United States,' &c. &c.

No. I.

In surveying the globe in reference to the different appearances of mankind, the most extraordinary diversities are apparent to the most superficial observer. The Patagonian and Caffre, compared with the Laplander and Esquimaux, are real giants, the stature of the latter being generally two feet less than that of the former. What a striking contrast does the coarse skin and greasy blackness of the African, present to the delicate cuticle and the exquisite rose and lily that beautify the face of the Georgian! Compare the head of the Circassian having those proportions which we so much admire in Grecian sculpture, with the flat skull of the Carib or that of the Negro with its low retreating forehead and advancing jaws! Or behold in the one the full development of intellectual power, as displayed in arts, science, and literature, and in the other a mere instinctive existence! Hence arises the question—*Have all these diverse races descended from a single stock?* But notwithstanding these extremes would seem, at first view, to forbid the supposition of a common origin, yet we find them all running into each other by such nice and imperceptible gradations, not only in contiguous countries but among the same people, as to render it often impracticable to determine, independent of the individual's locality, to what family of the human race he belongs.

Any one who allows himself to speculate upon this subject, will at first view be inclined to adopt the opinion that every part of the world had originally its indigenous inhabitants—'*autochthones*'—adapted to its physical circumstances. Voltaire, for example, ridicules the idea of referring such different beings as the Circassian and the Negro to the same original. By this hypothesis, a ready solution is afforded of some of the most difficult questions presented in the investigation of the physical history of mankind; for instance, the remarkable diversity in figure and complexion observed among different nations—their difference of moral and intellectual character—and their peculiarity of language and even dialectic differences, observed as far back in antiquity as the days of Jacob and Laban. We might thus explain the fact that the oldest records, ever since Cain went to the land of Nod, seldom allude to an uninhabited country; or the no less surprising fact that in many parts of the world, as for instance, Central America, we discover vestiges of a primeval population, who, having dwelt there for ages and brought the civil arts to a comparatively high degree of cultivation, were swept away before the dawn of history.

On the opposite side of the question, an argument thought by many to be conclusive as to the point at issue, is the inference deduced from the scriptural history of man, which ascribes to him a single origin. But such an application of the Sacred Records is manifestly contrary to their spirit and design; for the most sincere believers in Revelation now freely admit the deduction of the geologist, that the period of the creation of the earth extends far beyond 6000 years. However, as truth can never be in opposition to truth, the investigation of any subject which does not transcend the scope of the human faculties, cannot possibly detract from the authority and importance of the Sacred Writings. Indeed, many investigations into the laws of natural science which were thought at first to conflict with Holy Writ, have even been found in the end, as will be shown in this inquiry into the *unity* of the human family, to afford confirmation and elucidation of its divine truths.

One of the most interesting problems in history is, the geographical distribution of the human family; but history, if we exclude the Mosaic account, affords no data for determining this great problem. In the introduction to his great work on language, Adelung remarks as follows:—'Asia has been in all times regarded as the country where the human race had its beginning, received its first education, and from which its increase was spread over the rest of the globe. Tracing the people up to tribes, and the tribes to families, we are conducted at last, if not by history, at least by the traditions of all old people, to a single pair, from which, families, tribes, and nations, have been successively produced. The question has been often asked,—What was this first family, and the first people descending from it? where was it settled? and how has it extended so as to fill the four large divisions of the globe? It is a question of fact, and must be answered from history. But history is silent; her first books have been destroyed by time; and the few lines preserved by Moses are rather calculated to excite than to satisfy our curiosity.'

Assuming that the earth's surface was formerly covered to a certain depth with water—an opinion warranted by physical facts as well as the Mosaic records—the portions which first became dry and habitable, would of course be those which are now the most elevated. Hence the region of Central Asia, which in respect to elevation can be compared only to the lofty plain of Quito in South America, has been with good reason pointed out as the spot on which the Creator planted the first people—a point from which the human race gradually dispersed as new lands became habitable. This great table land, when it first became dry, was but an island in the watery expanse, with vegetable productions so entirely different from its present Alpine class, that it may have combined all the characters of the Garden of Eden. But Adelung, forgetting the influence of physical geography on climate, speaks of its 'snowy mountains and glaciers.'

---

* Researches into the Physical History of Mankind. By James Cowles Prichard, M.D., F.R.S., M.R.I.A., etc. London: 3 vols. 8vo., 1836, 1837, and 1841, pp. 376, 373, 550.

Crania Americana; or a Comparative View of the Skulls of various Aboriginal Nations of North and South America. Illustrated by seventy-eight plates and a colored map. By Samuel George Morton, M.D., Professor of Anatomy in the Medical Department of Pennsylvania College at Philadelphia. Philadelphia: 1839. Folio pp. 296.

Lectures on Physiology, Zoology, and the Natural History of Man, delivered at the Royal College of Surgeons. By W. Lawrence, F.R.S., etc. Salem: 1828. 8vo. pp. 495. (American edition.)

De Generis Humani Varietate Nativa. Gött. 3d edit. 1795, 8vo. *Collectio Craniorum Diversarum Gentium, Decades* I-VII. Gött. 1790-1826, 4to. By John Frederick Blumenbach, M.D., Aulic Counsellor to his Britannic Majesty, Professor of Physic in the University of Göttingen, etc.

An Essay on the Causes of the variety of Complexion and Figure in the Human Species. By Samuel Stanhope Smith, D.D., LL.D., President of the College of New Jersey, etc. New Brunswick: 1810. 8vo. pp. 410.

History then points out the East as the earliest or original seat of our species, as well as of our domesticated animals and of our principal food; but as historical sources of testimony are considered inadequate to determine the question whether the globe has been peopled from one or more original stocks, it has been found necessary to seek for satisfactory evidence through the medium of researches into the natural history of the organized world. Hence the inquiry has been resolved by the learned Dr. James Cowles Prichard, in his 'Researches into the Physical History of Mankind,' into the two following problems:—

'1. Whether through the organized world in general it has been the order of nature to produce one stock or family in each particular species, or to call the same species into existence by several distinct origins, and to diffuse it generally and independently of propagation from any central point; in other words, whether all organized beings of each particular species can be referred respectively to a common parentage?

'2. Whether all the races of men are of one species? Whether, in other words, the physical diversities which distinguish several tribes are such as may have arisen from the variation of one primitive type, or must be considered as permanent and therefore specific characters?'—Vol. i. p 9.

In our researches into the origin of the varieties of mankind, it is, therefore, necessary to dismiss all argument *à priori*. Let us repudiate that speciousness of argumentation which maintains that it is much more consonant with the wisdom of the Deity that each region of the earth should teem *ab initio* with vegetable and animal productions adapted to its physical circumstances, than that immense tracts, while a single species is slowly extending its kind, should remain for ages an unoccupied waste. The question belongs to the domain of natural history and physiology, as based upon the observation of facts. Hence, too, it is obviously improper to set out, as most writers on the subject have done, with a distribution of the human family into certain races, as this is in fact a premature anticipation of the result. It is only by proceeding in the analytical method, surveying the ethnography of various countries, and deducing conclusions from the phenomena collected, that the subject can be legitimately investigated.

Before proceeding to the details connected with the question, whether the various races of man belong to a single species, it may be well to state that by the term *species* in natural history is understood a collection of individuals, whether plants or animals, which so resemble one another that all the differences among them may find an explanation in the known operation of physical causes; but if two races are distinguished by some characteristic peculiarity of organization not explicable on the ground that it was lost by the one or acquired by the other through any known operation of physical causes, we are warranted in the belief that they have not descended from the same original stock. Hence, *varieties*, in natural history, are distinguished from *species* by the circumstance of mere deviation from the character of the parent stock; but to determine whether tribes characterized by certain diversities, constitute in reality distinct species, or merely varieties of the same species, is often a question involving much doubt—a doubt which can, however, be generally removed by a comprehensive survey of the great laws of organization.

As the natural history of man in regard to his origin may receive valuable elucidation from comparative physiology and the diversities observed among inferior animals, our attention will be first directed to this branch of the subject.

In regard to the question whether all the existing plants and animals, of each species, can be referred respectively to a common stock, Linnæus maintained the affirmative, averring that in every species of plants as well as of animals, only one pair was originally produced. Now if in tracing the dispersion of the genera and species of organized beings, (plants and animals,) it should appear that they exist in those regions only to which they may have wandered or been conveyed by accidental means, from some single point regarded as the primitive or original seat, the inference that each species has descended from a single origin is warranted; but if, on the contrary, the same species are found in localities so separated by natural barriers or vast distances as to forbid the supposition of their passage, the opinion of their distinct and separate origins is equally authorized.

In regard to the dispersion of plants and of the primary habitations of individual species, Prichard refers to three hypotheses:—1. That all the species of plants in every country, had their primary seat in one particular region, from which they have spread as from a common centre. 2. That every species had a particular centre or birth-place, but that different regions of the earth afforded the primary habitations of different species. 3. That the vegetable tribes, independent of any centres of propagation, have sprung into existence wherever the physical circumstances favorable to their development obtain. The first of these hypotheses is now considered irreconcilable with established facts. The second has many powerful advocates, among whom is Prichard. But the third, in our opinion, is gradually gaining ground, in proportion as the science of botanical geography is being developed by the accumulation of new facts.

In proportion as naturalists have explored the botany of remote countries, the distinguishing characters, on a comparison of their respective aggregates of plants, have become more apparent. Many important results have been deduced from the researches of Mr. Robert Brown, and MM. de Humboldt and de Candolle. In relation to the distribution of plants in reference to the three great classes, we find that the dycotyledonous family diminishes as we proceed from the equator towards the poles; that this law is reversed in respect to the acotyledonous class; whilst the monocotyledonous plants, in which De Candolle includes the ferns, exhibit but little variation of number in different zones. 'If we know,' says Humboldt, 'in any country under the temperate zone, the number of Cyperaceæ or of Compositæ, it will be possible to estimate that of the Gramineæ or of the Leguminosæ.' But, notwithstanding a certain analogy in the character of vegetation in distant countries, lying on the same parallels and characterized by similar physical circumstances, we do not discover an identity of species. America has, in common with Asia and Europe, many genera; but on comparing the intertropical regions of these three countries, the species, notwithstanding the genus may be common to two or even all three of them, are in each very dissimilar. It has been remarked by M. de Humboldt, as was before observed by the Count de Buffon, in relation to the distribution of animals, that it is chiefly in the Arctic regions where the two continents approximate, that we discover the same identical species of the vegetable kingdom common to both Proceeding south, as for example in the United States, we meet these common plants more rarely; and in their travels in equinoctial America, MM. de Humboldt and Bonpland found only twenty-four species, (all of which belong to the monocotyledonous tribes,) identical with those of any part of the Old World. In ascending a lofty mountain of the torrid zone, we also find that the parallel temperatures of more northern latitudes display a general botanical analogy. Hence several attempts have been made to divide the surface of the earth into botanical provinces or distinct regions of vegetation.

But as nature seems to have provided means for the dispersion of plants, it is necessary to consider the bearing of these facts upon the present inquiry. Of these means, one of the most obvious is human agency. Animals in general, more particularly birds, also contribute to their dispersion. The same end is promoted by means of atmospheric currents; for we often find the smallest seeds provided with winglets and feathery appendages, which facilitate their transportation by winds. Lastly, we know from actual observation that plants have migrated from distant coasts by means of the great oceanic currents.

From a consideration of these various facts, Prichard arrives at the inference, 'that the vegetable creation was originally divided into a limited number of provinces,'—a conclusion which he thinks strongly corroborated by the fact that in the northern continents, where their near approach affords facilities for migration, many plants are common to both, whilst in proportion as the continents become widely separated the number diminishes. 'On the whole,' he says, 'we may conclude, with a great degree of probability, that each tribe of plants, and especially of the more perfect plants, had on the earth one original habitation, from which it has been dispersed according to the capabilities afforded by its structure, and the aid of external agencies.' The phenomena connected with the vegetation of islands are also thought by Prichard to be strongly confirmatory of the dispersion of species from particular central points. In opposition to the hypothesis that the vegetable tribes, independent of any centres of propagation, will spring into existence wherever the physical conditions are congenial to their nature, he adduces also the negative evidence that similar climates on each continent, notwithstanding a general analogy, have dissimilar vegetation. But if we reject the theory of equivocal production, that is, of the spontaneous generation of the same species in many and remote localities, how are we to account, by the means of dispersion above enumerated, for the existence of similar aquatic plants in the marshes of distant countries? We find, for example, that under the same physical circumstances, the Nymphæa Lotus will spring up in India and in Hungary, and the Potamogeton Natans in Europe and in St. Domingo. To what other theory can we refer the phenomenon observed by Humboldt, that the same subterranean cryptogamous plants are seen in the mines of New Spain, which are known to grow in deep excavations of the earth in Europe? How else are we to explain the fact that when those mountains of Italy, which are of comparatively modern origin, were upheaved, their upper regions became covered with the vegetation of Lapland, whilst the intermediate country is devoid of those plants? In ascending Mount Ararat, according to Tournefort, we observe at its foot the plants of western Asia; a little higher up, the vegetable forms of Italy are recognized; next, those of central France; at a still higher level those of Sweden; and beyond this last point, the flora of Lapland and the Alps. Besides, geological investigations prove that subsequent to the era of the secondary formations, there has been a new development of vegetation on the surface of the earth. These facts favor the hypothesis that plants, independent of original dispersion from certain centres, will spontaneously arise wherever physical conditions exist adapted to their nature.

Reference may here be made to the fact that seeds may actually lie concealed in the earth for ages without losing their vitality. Thus, seeds found at Stirling, Scotland, in a bed of clay, which had been buried under fourteen feet of peat-earth, produced, upon being sowed, a crop of *chrysanthemum septum!* The circumstance that the pine forests of our western states, when burnt or cut down, are succeeded by forests of oak trees, is an analogous fact. It would seem, then, that where both the soil and the atmospheric conditions are equally suitable for many *social* plants, the strongest will choke the others, and finally obtain the complete mastery: but that the seeds of the weaker plants will for ages preserve their vitality in the earth, and spring into visible existence as soon as the proper conditions arise.

Dispersion of Animals.—One of the most powerful supporters of the theory of the spontaneous origin of animals is Rudolphi. 'As mould and various fungi,' he says, 'generate themselves under the necessary conditions, so likewise do infusory animalcules; and the most unbridled fancy can hardly imagine that the infusoria were produced in Asia, and from thence have been spread over the world.' But whether or not these lower orders of animals, whose diminutiveness baffles all accurate researches into their mode of origination, spring into existence without parentage, we know at least that the opinion derives no confirmation from the argument of analogy among the higher order of animals, whose structure admits of more satisfactory investigation.

As the existence of insects is closely connected with that of the plants and animals on which they subsist and often live, it follows that the laws of their dispersion must be much dependent upon those of the latter. According to M. Latreille, who has given much attention to the geographical distribution of the insect tribes, it appears that they are very distinct in countries separated by seas, vast deserts, and lofty chains of mountains, of which the locality, soil, temperature, and other physical conditions, are apparently similar. But although the same tribes of insects may not be found under the same parallel and similar local conditions, yet it has often been observed by naturalists that they are replaced by analogous groups.

Notwithstanding the adaptation of birds for extensive migration, we find that their geographical distribution bears an analogy to the rest of organized nature. Thus, in regard to the vulture tribe, we discover peculiarities in Europe and America, whilst in New Holland they are entirely unknown. Again, the parrot tribes found in Asia, Africa, and America, are each peculiar.

Although the inhabitants of the ocean are not, like those of the land, confined to particular regions, yet even among them we find a geographical distribution. If there do exist any cosmopolites in the ocean, it is some species of whales, which, according to the testimony of whale-fishers, traverse the globe from pole to pole. In regard to fishes it is known that those of the Mediterranean differ entirely from those of the Red Sea; that the silurus electricus appertains exclusively to the rivers of Africa, and the electric gymnotus to those of America; that flying-fishes are almost unknown beyond intertropical seas, and that among a vast assemblage of antarctic animals, none is found which is known to the waters of the northern hemisphere. The phenomenon of the same species of fishes being found in inland collections of water, however distant from one another, is very analogous to the fact of the diffusion of aquatic plants under the same circumstances. Those opposed to the theory of equivocal generation explain this fact by reference to the inundations attested by historical and geographical proofs, or on the supposition, as is done by Lyell, that the minute eggs of fishes are occasionally transported from lake to lake among the feathers af birds.

Having now reached that part of our inquiry which refers to the mammifers and reptiles of the land—animals confined by their limited powers of locomotion to the regions that gave them birth—the facts presented will lead to more positive conclusions, than in the case of the animals that cleave the air with wings, or elude our view in the ocean's depths, or in the researches of the botanist who may mistake for original centres of diffusion plants whose seeds have been transported to a distant shore by an oceanic current. In regard to tellurian animals, we may divide the surface of the earth into zoological provinces, each the abode of a particular group of animals, illustrating an admirable conformity between the organic capabilities of each and the surrounding physical circumstances. Thus, in the Old World, in analogous climates north and south of the equator, the species, notwithstanding many genera exist in common, are entirely different. The horse and the ass found in the northern hemisphere, are represented in the southern by the zebra and the quagga. On comparing the two continents, if we except the northern regions which approximate, the same law is discovered. When the Spaniards landed in the new world, they did not find a single quadruped of Europe, Asia, or Africa. For instance, the elephant, the rhinoceros, the camel, the dromedary, the hippopotamus, the giraffe, the lion, the tiger, the horse, and the ass, were not found in America. On the other hand, the lama, the peccari, the tapir, the jaguar, the agouti, the sapajous, the sloth, and others, were equally unknown in the eastern hemisphere. We read, it is true, of the American lion, but he is widely different from the lion of Africa—a remark that applies equally to the monkey tribes. As the continent of New Holland is remotely separated from all the other extensive tracts of land, so it has an assemblage of animals not less peculiar than its vegetation. Of the marsupial or pouched animals, which are so exceedingly rare in other countries, there are here more than forty species. In the class of reptiles, the same law obtains. Thus, the crocodile of the Nile is totally different from the alligator of America, and so of the boa of India and the python of the New World; and, as regards the poisonous species, the hooded snake is peculiar to Asia, the cerastes to Africa, and the rattlesnake to America. The peculiar adaptation or organic structure to local conditions is apparent in the camel of the sandy deserts, in which he is placed, as his stomach has cells for holding water; and also in the circumstance that the hoofed animals of South America are suited to the precipitous Cordilleras, whilst the solidungular quadrupeds of southern Africa are equally adapted to its vast sandy plains. With the exception of the extreme north, where the two continents so approximate that the distance between them, which is broken by islands, is partially frozen over in winter, the researches of the zoologist have not yet discovered that any individual species are common to distant regions. Nevertheless, particular groups are represented in parallel climates of distant countries by analogous tribes; for example, the tribes of the simiæ, and the dog and cat kinds, and other terrene animals, which, however, are very differently organized in the three great continents; and, notwithstanding this diversity of organization in the monkey, (an animal supposed by some to have a close affinity to man,) all the tribes, in the natural state, are confined almost wholly to the intertropical zone. As regards the zoology of islands, we find that small ones, remotely situated from continents, are in general quite destitute of land quadrupeds, whilst those near to continents have mostly the tribes which belong to the main land.

From a general view of the facts above adduced, the inference may be fairly drawn that each species of animal had an original centre of existence, to which it was by nature peculiarly adapted, and from which point they have dispersed themselves in proportion to their capabilities of enduring a change of physical circumstances.

Lest these conclusions, in regard to the distribution of organized beings, should be deemed hostile to the sacred records, a word of explanation may be necessary. If we follow the words of Scripture literally, maintaining that a pair of all living species was gathered from all the climates of our globe and preserved in the ark of Noah, we become involved in a zoological inconsistency, unless we call in the aid of supernatural agency; for, as animals are adapted by their structure and functions to the local conditions of food, soil, temperature, &c., all could not have existed on the same spot. Moreover, either the carnivorous animal must have perished in the ark, or some other species have been annihilated. Independent of this, the same supernatural agency was demanded in restoring these animals to their natural and primitive abodes; for how else could the polar bear, whose organization is adapted to a frozen region, retrace his steps through the torrid zone? But it is unnecessary to call in the aid of such a suspension of the ordinary laws of nature; for the meaning of the passage, in reference to the submersion of the 'universa terra'—the whole earth—may be fulfilled by rendering it in the words, 'the region inhabited by man,' inasmuch as the destruction of the depraved human race was the end proposed by the deluge. Hence the tribes of wild animals belonging to remote regions may have been spared.

LECTURES.

LECTURES ON GONORRHŒA AND SYPHILIS;

BY

JOHN HUNTER, F. R. S.

DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON.

[*From MS. Notes of Dr. Thos. Shute.*]

Lecture VII.

THE VENEREAL DISEASE.

Recent cases of the venereal disease are the most simple of any of cure.

When the disease is circulating in the blood, the seat of it must be attacked by carrying mercury into the constitution; but sometimes the absorbents will not take up the remedy, in which case every preparation of mercury should be tried. There are two ways of giving mercury; by the mouth, and externally. The external application of mercury is much the best when it can be complied with; for if the skin be affected, this is not so essential to life as the viscera. When given internally, it often affects the viscera, even in any form.

The quantity of mercury given for the cure must be in proportion to the disease. The quantity must likewise be administered in a given time, otherwise it will lose its effect on the constitution. For instance, one ounce of mercurial ointment will be more efficacious, if given in two days, than two ounces administered in six days; to be equally efficacious three ounces must be given in that time. A thousand ounces will not cure, if given so slowly as not sensibly to affect the constitution.

If mercury is very gradually given, so as by degrees to accustom the constitution to its stimulus, then a large quantity may be given in a short time, without producing any effect.

The effect produced by giving this medicine is an increase of the secretions, especially the saliva, sweat, urine, and secretions of the bowels. This last effect is produced by the increased secretion of the pancreas, and probably the other glands which belong to the intestines.

The cure does not depend on the evacuations or their quantity, for when those evacuations are produced by other medicines, this does not affect the disease. Evacuations are rather found to retard than facilitate the cure.

The quantity of mercury given must be regulated by the evacuations, for some constitutions are so much stimulated by mercury, that, if care is not taken, the salivation may be carried to such a height as to suffocate the patient. Some suppose that quantity is only necessary for the cure, but quantity alone will not cure, if ever so great, without the constitution is sensibly affected by it. Neither will a cure be effected when mercury produces a considerable salivation, if a quantity of it has not been given; for in some constitutions a very small quantity of mercury will produce a very considerable salivation, which will last several weeks; yet it is found that such salivation does not cure. It therefore appears that mercury must be given in such a quantity as to produce visible effects between the disease and constitution.

There are three ways in which mercury may act, so as to perform a cure; it may act on the poison by decomposing it, or by uniting with it, and carrying it out of the constitution; either of these actions must be chemical. Or it may act on the constitution by a stimulus on life. If mercury acts on the matter, then quantity alone would be sufficient to cure the disease. But if on the living principle, then quantity alone is not sufficient to produce the cure. The quickest cure will be produced by the quantity of its visible effects.

It is necessary to produce local irritations, such as increased secretions.

Rules for the Administration of Mercury.—Previous to the giving of mercury, it is proper to know how it affects the constitution; this may often be known of the patient from his having taken mercury before. For external application the preparing it with oil keeps it divided, it also attaches it to the skin and keeps it moist; it may likewise assist absorption and pass with it into the lymphatics. Perhaps the lymphatics are incapable of taking in mercury alone. To begin, one drachm may be rubbed in every night for six nights; if this affects the mouth, then the quantity should not be increased; but if the mouth is not affected by that time, more should be used at once. No rule can be absolutely given; it is best to affect the mouth a little. Sometimes it increases the sweat or quantity of urine.

The constitution may, perhaps, often be cured, before the local appearances are well; yet it will be proper to continue the frictions for about ten days after all appearances of the disease are gone off, to be secure. When mercury has failed in producing a cure, it is necessary to know in what it has failed before we attempt to give it again. The mouth in general is the best test of what the constitution will bear. When the mercury gets an outlet, it does not do so well, for it is apt to run off immediately that way without producing an universal effect on the constitution. The unction should be rubbed on a large surface, for the quantity absorbed is probably in proportion to the surface on which it is rubbed.

No kind of diet has effect in retarding the cure, and I think that a man would get equally as well if he lived ever so luxuriously, got drunk every day, and slept in the fields.

Cold, however, has very considerable effects; it may increase the venereal stimulus, and by that means counteract the action of mercury

Internal remedies are in general sufficient to cure; but there are many constitutions which cannot bear mercury internally in any form. It often produces disagreeable effects on the stomach and intestines, to prevent which it may be joined with essential oils, and tea of chamomile flowers given. The cause of mercury purging may be its meeting with an acid in the stomach, and forming a salt, which irritates the intestines. To prevent this salt from forming it may be joined with an alkali, therefore making it up with soap is often attended with good effects. To prevent its affecting the stomach and intestines, when the salt is formed it may be joined with opium or essential oil; joined with any fixed alkali or calcareous earth will prevent its forming a salt. If not given so, it may be joined with two-thirds of opium.

The doses of mercury given may be of mercurius calcinatus half a grain every night, which may be increased to two grains every evening and one in the morning. If calomel is given, three grains of that will be only equal to one of mercurius calcinatus. If crude mercury is given, fifteen grains are only equal to one of mercurius calcinatus.

It will be often necessary to continue a course of mercury for six weeks or two months. If the symptoms go off very quickly, it may be suspected that the constitution is slow of cure; when the symptoms are long in going off, the disease is not so apt to return. The way of life may be the same as before; vegetables often cause griping, by forming a salt with the mercury; when that happens they should be avoided.

In the second stage of the disease, where the periosteum and tendinous parts are affected, as much mercury as possible must be given, and steadily pursued, so as to affect the constitution. When the constitution has been accustomed to mercury, a much larger quantity of mercury must be given at first, so as to surprise the constitution, otherwise a large quantity may be given without any effect.

In these old cases, where it is necessary to give a large quantity of mercury at once in the beginning, it should be rubbed in, for the necessary quantity will be too much for the stomach and intestines to bear

Inflammation will remove nodes without mercury; therefore, by applying a blister, or making an incision down to the bone, the venereal inflammation will be entirely destroyed. The advantage of such a practice will be the removal of pain sooner than the mercury would have effected it. Another advantage will be the discharge of any pus which may have formed, for matter will sometimes lay a long time quiet, and lay the foundation for a future return of the disease. A woman in St. George's Hospital was salivated several times, each time having a return of her complaint. It was at last observed that she had a tumor on the inside of the biceps in the arm, which fluctuated; this was opened, and the matter discharged. She was then salivated again, and the disease did not return after. This tumor was a reservoir for absorption.

When venereal matter lays for a long time in a gland without going forward or backward for a considerable time, it is probable that such constitutions have a scrofulous tendency.

The local effects in old cases are with much more difficulty removed than in recent ones, they having acquired an indolent disposition. The matter produced is in general more like mucus than pus.

The nourishment given during salivation should be fluid, the patient being unable to chew solids; but the fluids given should be such as will become solid in the stomach, otherwise they will nourish very little.

Soup, broth, jellies, and all such kind of food, is absurdly given as nourishing: nature has not given us any food but what is solid, the stomach being only capable of digesting solids. It may be objected by saying that milk is a fluid; but milk becomes coagulated in the stomach, forming curds and whey; if it does not it affords no nourishment. An egg, when given raw, becomes coagulated in the stomach before it is digested.

If a dog is fed with a pound of meat every day, and weighed, to observe what he gains by it, and afterwards is fed with the same quantity of meat boiled down with as much water as he used to drink with the solid meat, it will be found that he will lose considerable in his weight, which is a proof that soup or jelly is little nourishing. Portable soup, when given solid, is nourishing, but when boiled, is little so. If a calf is killed half an hour after it has sucked its mother, the milk will be found curdled in its stomach

Mercury is the only medicine that can be trusted for the cure of the pox. Gum guaicum has a specific effect on the disease, but not sufficient to eradicate it.

A patient, who had venereal blotches and excrescences in each axilla, had a poultice of guaicum applied to the left axilla, and one of sarsaparilla to the right; the excrescences on the left side healed in a fortnight, when those on the right side grew worse. The guaicum poultice was then applied to the right side, and they got well in a fortnight. This man took internally half a drachm of guaicum three times a-day, with opium to prevent its purging; all the symptoms went entirely off, but the disease returned again in a fortnight. This case shows that guaicum has very powerful effects on the constitution, and may be useful in cases where the constitution will not bear a sufficient quantity of mercury to cure the disease. When the guaicum poultice was applied no medicine was given; it was after the excrescences were well that the guaicum was taken internally. In giving this medicine, as much should be used as the constitution will bear.

Ill-conditioned sores are often caused by giving of mercury. When mercury has destroyed the venereal disease, then the sarsaparilla will cure those ulcers which the mercury had occasioned, from which sarsaparilla has been supposed efficacious in the pox.

It has been before observed, that in venereal sores a new disposition often arises, which is increased by mercury and cured by bark. The ulcers in which sarsaparilla is beneficial seem to be of a third kind—that is, between the venereal and the new disposition. This third species is cured by sarsaparilla united with mercury; if mercury has not been previously given it does no good. Sarsaparilla is often serviceable in destroying that disease which mercury occasions in some particular constitutions. From the idea of its being of advantage in the venereal disease, it has been given with mercury, with a view to assist its operation. Whether it has this effect is not known; however, it is easy to conceive that it may in many cases be of service to prevent the disease occasioned by mercury. It is, therefore, very proper to join them. When given with mercury, the guaicum and other woods would be an addition to the medicine. The sarsaparilla is often given in decoction, three ounces of it to three pounds of water boiled to one pint; this quantity to be drank in one day. It is often taken in powder with the same effect; but an extract made into pills would be the neatest way of taking this medicine.

Hemlock is sometimes very useful in these cases, especially where they have a cancerous appearance. Fomentations of hemlock cured a patient with such ulcers in six weeks.

To the new disposition mercury is a poison; and when mercury has reduced the venereal below the new disposition, then that takes place, and the ulcer flies out. When this disposition is reduced below the venereal, then it flies out again, each time vibrating backwards and forwards as the pendulum of a clock, and each time being less and less until it is cured.

The crude mercury and calx are soluble in saliva. If crude mercury is held a considerable time in the mouth, it becomes soluble, and may be tasted, and the taste remains in the mouth for some hours after. Gold is likewise soluble in the saliva, but the taste of this will remain in the mouth for two or three days.

I made the experiment of tasting crude mercury in my mouth, to ascertain its true taste. I afterwards tasted other preparations of mercury in the same manner, and found they were all alike. I then made a course of experiments with different preparations of mercury, first taking mercurius calcinatus until it affected my mouth, and I found it had exactly the same taste as the crude mercury. I afterwards made my mouth sore at separate times with calomel, corrosive sublimate, and by unction; each gave exactly the same taste when they affected the mouth, and other preparations gave the same taste on experiments. Hence I conclude that every preparation acts in the same manner, and is the same when in a state of solution in the constitution. If it was not dissolved it could not be tasted.

Crude mercury is not easily soluble in the juices; therefore, when taken undivided, it has little effect When divided by gum arabic or other means, it is easily soluble in the stomach, and purges. The calx is still more apt to purge, being easier soluble in the juices. All the preparations of mercury are soluble in the animal juices, and are reduced to the same state. If the preparations could enter the constitution in the state they are administered, then the cure must be performed in different ways, for their actions must be different.

Mercury causes irritability in the system, which is shown by people who are accustomed to be electrified; for the same shock which they have been used to, they cannot bear after having taken mercury for some time. Therefore, where electricity has done little good, by giving mercury it has so disposed the constitution to be irritated by it, that it afterwards has cured.

A gentleman had electricity recommended for a complaint which he then labored under: it was used for some time without any apparent effect At length, having the venereal disease, he took mercury, and while under this course electricity was again used for the former complaint; but upon trial the patient had become so irritable that he could not bear a shock of half the force of the former; but electricity now had more effect on the disease than before, though the shocks had been twice as strong, and he at length was perfectly cured. From the above case the surgeon took the hint to give mercury in other cases where electricity was used without effect, and with equal success.

When Mr Walsh was making his experiments on the torpedo, a servant who assisted him, and who was very familiar with the effects of electricity, was made so irritable by mercury that he could not bear the usual shocks.

From the action of mercury sometimes being too violent, medicines are advised to check it; sulphur has been chiefly recommended, and this seems to prevent its operation on the constitution; it may, perhaps, combine with the mercury, and make a kind of Æthiop's mineral, that medicine being a combination of mercury and sulphur. Æthiop's does not act as mercury does.

When sulphur is chemically combined with metals, it prevents their effects on the constitution; and when combined with mercury, the preparation has no effect on the constitution as mercury, as factitious cinnabar, for instance, not even when mechanically combined; for Æthiop's mineral is only the mercury mechanically combined with sulphur. That sulphur enters the constitution is known from the sweat and urine smelling of it; when taken freely it will then cure the itch. Its power of stopping the effects of mercury may arise from its effects on the salivary glands, being different from that of mercury. When sulphur is united with a metal, it destroys its solubility in the animal juices. None of the cinnabars act either as sulphur or as mercury. Crude antimony is almost inert from the large quantity of mercury it is combined with. Sulphur even destroys the power of arsenic; as also iron, under which last state of combination, it forms a pyrites. It is probable that sulphur acts as an antimercurial stimulus, and by that means counteracts mercury. When mercury attacks the bowels it is often dangerous, but it is in our power to check its effects on this last part more than any other, for which opium should be given in such quantities as shall be equal to the disease, and it seldom fails to cure all the symptoms. Purging is likewise recommended, but that can have no effect.

Sometimes there is a continuation of the salivation from habit, a gleet of these parts, which is very different from the salivation continued from the action of mercury, and must be treated differently. In such cases a strengthening diet must be used, and a course of strengthening medicines, as the bark, &c. It likewise will be useful to wash the mouth with astringents, as decoction of bark, the tincture, &c. Sea bathing is a very good restorative of a relaxed habit, particularly after mercury.

The teeth often become loose from an absorption of the alveolar processes and gums; these are taken up from an irritation of the parts; the gums slough, and pieces of the jaw often exfoliate. What state the alveoli are in when the teeth are loose, and how they afterwards are fastened, can only be with certainty known by examination in different states.

Prevention of the Disease —The origin of this infection being known, it can with the more certainty be prevented. It may be prevented in two ways—the first is, by using such substances as will prevent its stimulating, such as oils of all kinds; if they have a little degree of tenacity, they are the better. Oil rubbed on a free part adheres to it, and prevents any thing watery touching it. The second have a power of mixing with the venereal matter, and removing it from the part to which it is applied; of this kind, the caustic alkali is the best, as it unites with the matter, forming a kind of soap, and by that means is easily washed off; it is possible that this union with the alkali may destroy the poison. The alkali must be diluted or it will excoriate. Aqua calcis makes a pretty good lotion. If both these modes are used there will be still more security. Goulard's extract has a power of coagulating the animal juices; how far this will answer I cannot determine, for the matter may be coagulated and still not destroyed.

CLINICAL LECTURE

ON DISEASES OF THE
Heart, Liver, and Kidneys---Ascites, and Anasarca.

BY DR. SEYMOUR,
Surgeon of St. George's Hospital, London.

You will generally find that where you are called in to a case which assumes the general symptoms of anasarca over the whole of the body, and that such symptoms arise from one single cause, it is generally found that there is enlargement of the heart, and that the venous blood returning to the left side of that organ becomes stagnant. As a result of this you have fluid poured out in the chest, which serves to keep up the balance of the circulation, and thus preserves life; if such a temporary relief to this oppression of the circulation were not afforded, the patient would die suddenly. As long as this effused fluid is secreted the patient may live; but when this ceases the patient dies. Thus, when you find the dropsical symptoms receding, you may generally conclude that the patient will not live long afterwards; for you are to remember that though the dropsy may disappear, the organic disease which caused it remains the same, and that though one symptom may have gone off, the others remain in full morbific action. Now, such a state as this is by no means uncommon in practice; you will have patients in whom a local effusion may suddenly recede, and in two or three days they may die. But you must distinguish between such a case as this, in which the dropsical symptoms recede and the flow of urine ceases, from one in which these same symptoms are brought about by the operation of medicines. In a state of organic disease like this, the dropsy is a relief to the oppressed circulation. The remote cause, whether it occur in the upper or lower classes of society, may generally be traced to intemperance, from the result of which the heart becomes affected with disease at an earlier or later period; or it may proceed from undue or excessive bodily exertion, by which the heart becomes strained, or from a rheumatic disease terminating in an effusion of fluid into the cellular membrane.

If you are called in to a case and you find it to be a simple uncombined one of anasarca, your attention should first be directed to the state of the heart, its actions, motions, and sounds, and whether these are of a normal or an abnormal kind; you should then inquire whether the powers of the respiratory organs are affected in ascending a flight of stairs, or in lying down in bed. In pursuing your inquiries, you may find the heart to be diseased, from an increase of its size and volume, and this is termed concentric hypertrophy of the heart; or this state, or one very nearly assimilating to it, may proceed from a previous rheumatic affection, by which its external surface may, by rheumatic inflammation, have become glued to the inner surface of the pericardium; or, again, you may have in these cases a contraction of the volume of the heart, with the above results appearing as a consequence.

Next to a diseased state of the heart producing anasarca, the most frequent cause of this cutaneous dropsy is from disease of the kidney. You may recognize this disease to be present by the urine coagulating by heat; if the patient be young, the countenance is white and pasty, and the blood, when drawn from the arm, assumes the buffy appearance. Dropsy is a more frequent sequel to disease of the heart than to disease of the kidney; but it may occur as the result of both these affections in one and the same person, occurring at one and the same time; and this is the case with one of these patients up stairs, in whom the heart is enlarged and hypertrophied, and is from this cause become, as it were, an obstacle to its own natural freedom of motion; and there is such a necessity at the same time for the capillary vessels to relieve the system, that large bladders are forming on the skin, and these, in a low state of system, will sometimes run on into gangrene, from the blood being checked in its circulating course.

In the other case, to which I have appended these observations, you will recollect that, from the history of the case which we obtained, it appeared that he had been very intemperate and a hard drinker, and, as a result, he had got disease of the liver. Now, if you have a case of diseased liver alone, uncombined with any other visceral organic disease, you will most frequently have ascites as a consequence. All the blood in the abdominal cavity returns through the vena portæ to the heart; and if, from organic disease of the liver, the vena portæ be at all compressed, and an obstacle thus created to the passage of the blood, it would be thrown back again, and the abdominal capillaries would throw out fluid, and ascites would be thus induced. Anasarca never results from disease of the liver alone; but you may have anasarca and hydrothorax from disease of the heart, and you may have ascites from diseased liver.

If you are called to a patient whose face is swollen and puffy, his pulse small, and his limbs swollen, you may generally be pretty sure that he has disease of the heart; if, on the other hand, you see one who is pale, thin, and wasted, with the abdomen swollen, and the legs so puffy that they pit upon pressure, you may rest pretty well assured that such person has got disease of the liver; and if, in addition to all these symptoms, you find the urine red, and loaded with the acids, you may be sure that there is disease of the kidneys as well. You will not always find these symptoms to be coexistent in one and the same case; there may be in each case a different series, according to the internal organ which is most severely affected.

I have several cases of what is termed concentric hypertrophy of the heart, in which that organ has been of four or five times its natural size. Ascites is a species of dropsy more frequently met with in women than in men, and very commonly affects those who have worked very hard, and generally arises, as I have before said, from disease of the liver alone. It was formerly thought that an enlarged liver was the most frequent cause of ague; you will occasionally meet with these two affections coexistent at one and the same time, and almost every person you meet with will possess some general idea that dropsy is the consequence of an enlargement of the liver. Ascites, when it arises from this latter disease of the liver, is a much more curable complaint than where it is caused by quite an opposite state of the liver, in which that organ is smaller and more contracted in its volume than natural, and harder in consistence; its peritoneal covering is contracted and puckered up, and you have to lift up the ribs to feel it. Another form of diseased liver, productive of ascites, is, where it is studded with encephaloid tubercles, its size and vascularity are abnormal, and its vascular portion is looser in its texture than natural. I suppose I have seen upwards of fifty cases in which the liver has been diseased from contraction and diminution of its volume, and where great wasting of the body has occurred during life; after death the liver has been found puckered up under the right hypochondrium, its edges rounded and blunt, which appearances seemed to arise from thickening of its peritoneal coat; I say 'seemed to arise,' because I do not think that such was in reality the cause. I have met with some writers on this disease who have supposed this to be the fact, but I cannot help considering them to be wrong. This thickening and hardening of the organ is uniform over its whole surface. As connected with this subject I may mention to you, that there is a disease of the liver in which its substance is studded with large white tubercles, which in their nature approach to the character of scirrhus, and when you make a transverse section of the organ, you find the interstitial substance between these tuberculous deposits filled up with a peculiar secretion. The liver appears to be made up of red and white masses, and the peritoneum covering them is transparent; this state of diseased liver is accompanied by dropsy. With regard to the remedial measures to be adopted in the treatment of dropsies dependent upon these peculiar organic affections of the liver, I may observe that mercury is a remedy on which no dependence whatever is to be placed; tapping will give a patient some temporary relief, and I have seen as large a quantity of fluid as fifty pints of water drawn from the abdomen under these circumstances.

Respecting the treatment adopted in these cases, I have not much to say to you. The pulse was weak, and the circulation seemed oppressed. The patient was bled to a small quantity, with some partial relief. The medicine which I have always found of the greatest service in these cases, is the elaterium—the fecula of the squirting cucumber, in the dose of from one-eighth of a grain to one grain; this medicine is a powerful purgative. In administering it I have never begun with so small a dose as one-eighth of a grain; but when I had charge of the Seamen's Hospital I have given as much as two grains with much benefit. I have generally commenced with half-grain doses, which will sometimes produce vomiting and sickness, as well as purgation. I did not find that this remedy produced that continued benefit which I wished, and it was discontinued. I now gave him a mixture of digitalis, oxymuriate of mercury, and cantharides, for some days, but these remedies (powerful as they are in most cases of dropsical effusion) did not produce much benefit, and they were left off. I now applied a blister over the surface of the heart at frequent times, and from this he derived very great benefit, and was able in a few days to lie down in bed with more ease and comfort than he had been able to do for some time. In cases similar to these, however, some of the benefit is due to the gruel which these poor patients enjoy in the hospital. He now took the soluble tartar, with the liquor potassæ and syrup, and one grain of opium, at bed time, to prevent the tartar working off by the bowels, as well as to procure sleep at night; and he was much improved after following this treatment for some days. Blisters are not always to be depended upon in these cases, however; I have met with some examples of hydrothorax, in which gangrene has ensued after the application of blisters. In some cases you will find the occasional addition of a small quantity of blue pill to the opium to be a valuable adjuvant. In the second case, where the dropsy is of a passive kind, I found the effusion of digitalis, with the oxymuriate of mercury, and cantharides, to be of great service; and he was much relieved after taking it for some days. I do not, however, believe that this poor man will ever entirely recover; but by the improvement of his health, his life may be prolonged and rendered more comfortable. It is in these peculiar cases of passive dropsy, accompanied with great weakness, that you will find the digitalis to be of such service; so that though the heart may be extensively diseased, the lips black, the pulse weak, feeble and vacillating, and the skin cold, yet, in a few days after giving the digitalis, so as to affect the kidneys and evacuate the fluid, you will find the patient to improve very greatly; the action of the heart becomes free, and the pulse full and firm. In one of these cases (that of Flegg) the disease of the kidneys is what is termed granular disease; when he lies down in bed he is greatly distressed, and this latter symptom of severe suffering in each of these cases, from assuming the recumbent position, arises from different causes; in one of these cases there is great congestion about the chest, blueness of the lips; and great difficulty of breathing, from the anasarcous swelling; but in the other case the expression of pain and distress is almost characteristic of horror; and this feeling of intense agony and suffering arises from dilatation of the heart and aorta. You may be sure that where there is this acute pain and distress, accompanied with anasarca and great difficulty of breathing, there is also disease and dilatation of the heart, with, perhaps, also a similar condition of the aorta. I have seen such a multitude of these cases that I can no longer doubt the fact. There was a case of this kind sometime since in the house, and he could neither lie down or stand up with ease to himself, but he found that the only position of comparative ease was to recline slightly forwards on the back of a chair; he died, as you may suppose, in a short time, and on examining his body after death, the trunk of the aorta was found to be studded with atheromatous matter. The acute distress which patients feel in these cases, arises not from the blood being thrown back upon the lungs, but from the dilated state of the aorta. With the hope that some powerful diuretic might afford him a temporary relief, I gave him a decoction of broom tops; this is a medicine which has of late been much vaunted as a more powerful diuretic than any we have hitherto possessed, but in this case it was of no greater service than other diuretics which we commonly use would have been; and I have, in other cases in which I have been induced to employ this medicine, met with none of those extreme beneficial results which some have ascribed to it. I then ordered him to have some diffusible stimuli, to rouse the weak and languid powers of his system. If the kidneys had been in a healthy state, the diuretic medicines would have relieved him; but this not being the case, the advantage which would otherwise have been gained was lost. Such cases as these are very valuable, and well deserving of your attention; for, although you may not be able to cure them, you have yet to learn the important study of how far the sufferings they cause may be susceptible of relief and alleviation.

In the other case I found that, day after day, the thighs and scrotum became more enlarged and swollen, and for the purpose of relieving the extreme tension I ordered them to be acupunctured. The practice of employing cutaneous scarification for the relief of dropsy is a very old one, for nothing could be more natural. It was performed in many ways by the ancients, and those who followed after them were accustomed to make small cutaneous incisions above the inner ankle. I recollect a case of anasarca in this hospital, under the care of Dr. Nevinson, which was treated in this manner; the man sat with his legs in a bucket for three days, during which time many gallons of fluid passed off from his system, and he felt very great relief; but in a short time an erysipelatous blush spread around the punctures, gangrene ensued, and he died. I have heard it said that such a result as gangrene, from worrying the skin, is not so likely to occur in private practice, or where small punctures only are made with a needle in the skin; however this may be, I do not recollect a single case of the kind in this hospital in which gangrene has not, sooner or later, shown itself. There are some constitutions in which, at certain seasons of the year, gangrene is very apt to show itself; in some it will even come on after the application of a blister. I recollect the case of a gentleman who had extensive anasarca, and it was requisite, for the benefit of his surviving friends and family, that he should live over a certain period. Mr. Hawkins punctured the scrotum, and the patient was much relieved; after a time it again became distended, and again it was punctured, with great relief; but after a time erysipelas and gangrene developed themselves around the punctures, and he died. In such cases, for these reasons, I never desire to see the operation performed, unless it is very strongly required.

REVIEW DEPARTMENT.

Quarterly Summary of the Transactions of the College of Physicians of Philadelphia. May, June, and July, 1842.

In the same number of the Summary of those valuable Transactions, which we noticed last week, we find the following excellent remarks by Dr. Condie, on one of the most painfully interesting maladies which afflicts our race:—

PUERPERAL FEVER.

So far as the observations of Dr. Condie extend, the disease has been found to occur alike in the young and middle aged—the robust and delicate—in those surrounded by every comfort and afforded every attention demanded by their situation, as in the poor and destitute—as well in those who were confined for the first time, as in those who had already borne a number of children—and as well after the most rapid and easy labors, as after those that were protracted and difficult.

Usually, within the first three days, but sometimes within a few hours, after delivery, the patient was seized with a chill, differing in intensity in different cases—being sometimes so slight as scarcely to attract attention, while at other times it amounted to a perfect rigor. The chill was quickly succeeded by a febrile reaction, attended with a hot, dry skin, some thirst, a white milky fur upon the tongue, and a quick, rapid pulse, amounting in some cases to 160 or 170 and upwards in a minute. The pulse was often full, but invariably soft and compressible. There was, from the very onset of the disease, a peculiar anxious or distressed expression of the countenance—and a mottled or irregular flushed appearance of the face. The patient soon after the attack, generally complained of some soreness or dull pain—often confined, at first, to the groins or across the hypogastric region. The pain was increased upon pressure. It very speedily increased in intensity, and spread over the whole of the abdomen, which now became tumid and more or less tympanitic.

In many cases, the pain of the abdomen was described by the patient rather as a sense of soreness than of acute pain, and although augmented upon the slightest pressure being applied, the increased suffering was indicated more by the expression of the patient's countenance than by acute cries. Occasionally, the doctor found that when the pressure was steadily continued, and gradually increased, the pain would appear to be rather lessened than augmented. The bowels were usually constipated, but in all the cases which fell under the observation of Dr. C., they were easily acted upon—the exhibition of an ordinary dose of any mild cathartic, causing full and repeated evacuations, differing in appearance, being either ordinary fæces, or a dark colored, very offensive fluid—followed, more or less speedily, by the frequent discharge, with considerable tenesmus, of small portions of a slightly discolored mucus. In one case, in which the discharges from the bowels were very frequent during the entire continuance of the disease, they consisted entirely of small quantities of a transparent gelatiniforme fluid.

From the first onset of the disease the stomach was, in nearly every case, extremely irritable—rejecting soon after they were swallowed, the drinks and other articles taken by the patient. Occasionally, the frequent ejection, by vomiting, of a greenish flocculent fluid, occurred at an early period of the disease.

Very generally, so soon after the disease became fully developed, the secretion of milk, as well as the local discharge, ceased, or became greatly diminished—occasionally, however, the milk was secreted very freely until within a few hours before death, and the only change observed in the condition of the lochia, was in its becoming much darker, and exhaling a disagreeable, but not decidedly fœtid odor.

Soon after the occurrence of the abdominal pain and tumefaction, the respiration of the patient became short and oppressed, and attended with an intolerable sense of weight and uneasiness at the præcordia. Some of the patients referred all of their sufferings, in the advanced stage of the disease, to this peculiar and distressing sensation; declaring that if only this could, by any means, be removed, they would be well. The oppression and difficulty of respiration was not always found to be in direct proportion to the emphysematous distension of the abdomen.

As the disease progressed, the abdomen became, in general, more swollen, tense, and painful; the shortness of respiration more striking, and the pulse more frequent, quick and feeble—the countenance of the patient assuming a very peculiar, dusky hue, and dejected expression. The irritability of the stomach increased—vomiting became frequent—and, very commonly, there speedily ensued a discharge from the stomach, at short intervals, by a species of eructation, of mouthfuls of a dark greenish or chocolate colored, flocculent fluid, which, according to Dr. C.'s observation, was invariably a fatal symptom; it being very soon succeeded by a cold, clammy condition of the skin, occurring first in the extremities—a dark leaden hue and haggard expression of the countenance—a sunken state of the eyes—profuse perspiration, especially about the head, face, and superior extremities—and death. In one or two cases, death was preceded by violent delirium—an injected state of the eyes—flushing of the cheeks—convulsive movements of the limbs, and other symptoms of encephalic inflammation; but, in the majority of instances, the mental powers of the patient were but little affected throughout the disease; death appearing to result from complete exhaustion of the vital powers, and occurred without a struggle.

In some of the cases, a short time previous to death, there occurred so complete a remission of all the distinguishing symptoms of the disease, as to induce the belief, even in the medical attendants, that the patient was about to recover. This remission was, however, in all the instances which have fallen under the notice of Dr. C., speedily followed by collapse and death. In one striking instance, seen by the doctor, in consultation with Drs. Hewson and Hodge, the patient, on the fourth day after what was considered a very severe attack, was found sitting up in bed, free from fever, pain, and difficulty of breathing, nursing her child; on being questioned, she declared that she felt perfectly well, though weak—the next evening she was a corpse.

Death generally occurred upon the third or fourth day of the disease—in but few cases was the disease protracted beyond the fifth day.

The doctor remarked, that it was a fact worthy of notice—though he was not aware it would throw much light upon the causes and pathological character of the disease—that in the neighborhoods and even houses in which cases of puerperal fever have occurred, erysipelas has prevailed to a greater or less extent. Erysipelas has indeed been far more prevalent throughout the whole of the districts south of the city, during the past winter and spring, than Dr. C. has known it to be during the last twenty-six years.

An important query presents itself, the doctor observed, in reference to the particular form of puerperal fever now prevalent. Is it, namely, capable of being propagated by contagion, and is a physician who has been in attendance upon a case of the disease, warranted in continuing, without interruption, his practice as an obstetrician? Dr. C., although not a believer in the contagious character of many of those affections generally supposed to be propagated in this manner, has nevertheless become convinced by the facts that have fallen under his notice, that the puerperal fever now prevailing, is capable of being communicated by contagion. How otherwise can be explained, the very curious circumstance of the disease, in one district, being exclusively confined to the practice of a single physician, a Fellow of this College, extensively engaged in obstetrical practice—while no instance of the disease has occurred in the patients under the care of any other accoucheur practising within the same district; scarcely a female that has been delivered by this gentleman for weeks past has escaped an attack? Wishing to confine his remarks on the present occasion entirely to the facts that have fallen under his own observation since the occurrence of the disease in this vicinity, Dr. C. declined referring to the numerous facts upon record, in proof of the contagiousness of puerperal fever.

The cases of the disease that have fallen under the notice of Dr. C., have been very variously treated; in the majority of them, the effects of venesection in the first stage, followed by active purgation, have been very fully tried, followed by fomentation and blisters to the abdomen, and Dover's powder, the nitrous powders with calomel, pills of blue mass, opium and ipecacuanha, spirits of turpentine, &c., internally. Under every variety of treatment the disease has appeared to run pretty much the same fatal course. So far as the observasions of Dr. C. extend, the disease is not one in which active depletion, but more especially by the lancet, will be found to produce any good effects:—in fact, in no one of the cases in which he has been consulted, could he be induced even in the earliest stages, to give his consent to the detraction of blood to any extent—so strongly did the character of the pulse, and all the symptoms present contra-indicate it. In one instance, the extensive application of leeches over the abdomen, appeared to him to cause a very decided abatement of the pain, and more urgent symptoms of the disease; but from the rapidity with which the patient subsequently sunk, and the early period at which death took place, he is fearful that the occurrence of the fatal collapse, was accelerated by the leeching.

In the cases of the disease which have occurred in the Philadelphia Hospital, Blockley, the effects of direct depletion have been very fully tried—in every instance, however, in which venesection has been resorted to, in that institution, if Dr. C. is correctly informed, the disease has terminated fatally.

Blisters to the abdomen were certainly beneficial in every instance, by the abatement they procured of the pain and intumescence—applied over the præcordia, they appeared, in some instances, to relieve very decidedly the oppression and distress caused by the difficulty of respiration.

In one case, the administration of small doses of acetate of lead in solution, suggested by Dr. Hewson, very speedily abated the irritability of the stomach, so as to enable it to retain the drinks and remedies subsequently administered, which previously had been almost immediately rejected.

De l'Ophthalmie qui Règne dans l'Armée Belge et des Moyens d'Arrêter la Propagation de cette Maladie dans toute agglomération d'Individus. Par H. P. Gouzee, Docteur en Médecine, Médecin principal de l'Armée, Médecin en chef de l'Hôpital militaire d'Anvers, &c. &c. Bruxelles, J. B. Tircher, Libriaire médicale et scientifique, rue de l'Etuve, 20; Paris, J. B. Baillière, rue de l'Ecole-de-Médecine, 17. 1842. 8vo. pp. 268.

We have received from the accomplished author a copy of this able work. It presents a comprehensive view of the causes, symptoms, pathology, and treatment of the troublesome ophthalmia which prevails in the Belgian army. An elaborate appendix, occupies nearly one half of the volume, and contains a great amount of judicious and practical matter. A few copies have been deposited at the office of the *Lancet*, for sale. We have not space at present for a formal notice of the work, but will embrace an early opportunity of devoting two or three columns to a review of such portions of its contents as present new and peculiar views.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, August 6, 1842.

The *Western and Southern Recorder* speaks of the Lancet as 'a spirited and caustic if not a rather unamiable laborer in the service of science.' With all who do not spare the lash when its salutary discipline is necessary, we 'own the soft impeachment.' Many, doubtless, have thought with our placid, and good-natured contemporary, that we have been on some occasions severe enough, and disposed to deal with undue harshness. But never have we rendered unto transgressors more than we honestly believed they deserved, and in no instance have we lost sight of the grand object of all punishment—the benefit of the individual and of the society in which he moves. And the great sin of omission, with which the medical press of this country stands charged, is its remissness and unfaithfulness in expressing its unaffected disapprobation of improper conduct on the part not only of individual members of the profession but of public bodies. The conductors of the medical periodical press here, have been too much under the control of little *cliques* and parties, and medical publishers, and medical institutions—they have failed to sway with manliness and vigor, that potent power for the achievement of good which is within their hands. Hence the silence—the humiliating neglect, with which the great question of medical educational reform has been so universally treated. Hence the freedom and immunity enjoyed by professional incapacity, and dishonesty, and mercenary speculation. Hence has the impudent and wholesale plagiarist been permitted to strut and stalk, unreproved and unabashed! Hence has the puerile and incompetent teacher been not only allowed to defraud our students of their time and substance, but been bespattered with eulogy, and puffed into a bloated and blowing self-sufficiency! Hence has young and struggling merit been suffered to gasp and writhe under the foot of banded ignorance and malice, without one friendly arm being stretched to save, and scarce one kindly brother's voice uttered to soothe the agonies of the mangled victim!

The only efficient agency by which professional abuses can be rectified—salutary reforms effected—and the science of medicine elevated to its just rank, is The Press. What has not this great instrumentality already effected in society at large? The human mind has been, by it, emancipated from the bondage of the dark Past, and Christendom now rings with the shock of conflicting opinion. Even already the most glorious results are apparent. Ignorance and error, and venerable wrong, are yielding before Truth's omnipotence, and Prejudice herself, even in the darkness of her unbelief, is awaking to the conviction, that the latter day of light and liberty is coming. And, assuredly, that conductor of the press, however humble his position, however small his talent, in whatever particular field he may be stationed, who shrinks from the stern, unflinching discharge of the duties of his trust,—who proves a 'dumb dog,' incurs a fearful responsibility. Be it ever our fervent aspiration that we may understand and perform our duty. We may be called 'unamiable,' and 'malevolent,' and 'guilty of aspersion'—but never may we be called unfaithful! Never may we be afraid to express the honest convictions of our mind—never may we cease to hate wrong and oppression!

We have ascertained that there is at present in the press, a peculiarly spicy pamphlet, entitled, '*An Exposition of the Character and Conduct of* John Augustine Smith, M. D., Professor, &c. By James R. Manly, M. D., late Lecturer on Obstetrics, &c.' —or something to that effect.

THE MEDICO-CHIRURGICAL REPORTER.

Diagnosis of Phthisis Pulmonalis.

BY ARCHIBALD HALL, M. D.,

Lecturer on Materia Medica and Therapeutics, University of M'Gill College, Montreal.

[FOR THE NEW YORK LANCET.]

The following communication is designed to draw the attention of the medical profession generally, to the elucidation and conformation of the Diagnosis of Phthisis Pulmonalis in its early days. The physical signs by which this disease is characterized in its incipiency may be regarded almost, if not entirely, as negative, no positive sign having been hitherto detected by the stethoscope, while the same instrument has not only enabled us to discriminate accurately between the various other diseases of the same organs, but to trace also their complications, and the stages through which they consecutively pass. Bronchial respiration, bronchophonism, and dulness on percussion, are at least exceedingly deceptive, and will be found frequently to exist where no tubercles may be present. The murmur of inspiration affords us no evidence, while that of expiration, is, I believe, capable of furnishing an excellent diagnostic,—at least, I have in several cases prognosticated the disease as existing, while nearly all other signs of it were absent.

The act of respiration may be divided into two stages,—the first of inspiration, active as regards the individual, passive as regards the lungs; the second of expiration, passive with respect to the individual, and active with respect to the lungs. In healthy lungs, the duration of the latter compared with that of the former is seldom more than one-fourth or one-fifth. In various pulmonary diseases the relative duration of these sounds becomes much altered, in some cases the act of expiration becoming equally as prolonged as that of inspiration. Until lately this appears to have escaped observation among the mass of auscultators, but I have no doubt that most important diagnostic signs may be deduced from it. I have also observed that while the murmur of the inspiratory act is perfectly normal, that of expiration, equal in duration to the former, is attended with a ronchus or rale, which has varied from a simple roughness, to a pressing, or subcrepitant or mucous. The following case first drew my attention to the subject, and was so strongly marked, as to induce to further investigation. I was called to attend her on the 26th of February; she died on the 27th of April.

Miss F. E., æt. 29, cachectic appearance, emaciation, sallow countenance, occasional hissing cough, sputa mucous furnishing no evidence of tubercles, absence of pain in chest, anorexia, pulse during whole period of attendance from 120 to 140, dyspnœa, tongue clean, bowels regular, slight colloquative sweats, absence of catamenia. Physical signs—percussion normal over whole chest, bronchophonism general over right lung, inspiratory murmur clear and normal, expiratory murmur of equal duration with the inspiratory in the dorsal region of right lung, and then attended with a subcrepitant rale. These physical signs never yielded, nor were they replaced by others of a less dubious character. Towards the close of the disease the sputa was mixed with whitish spots and chiæ, evidently tubercular. As this lady lived some distance from town no autopsy was requested.

Mary Neeson, æt. 35, was admitted into the Montreal General Hospital under my care for rheumatism, May 6th. A pulmonary affection shortly supervened, the rational and physical signs of which indicated extensive bronchitis of the upper portion of the left lung. To appropriate treatment these signs gradually yielded, and became about the 25th replaced by a normal inspiratory murmur, and a prolonged subcrepitant expiratory one.' On the 4th of June, the following physical signs and diagnosis were taken down in writing:—Percussion of left lung, in subclavicular and lateral regions, dull; of right lung, normal; ribs scarcely raised by the act of inspiration, over lateral region of same lung; cavernous respiration, gagouillement, and pectriloquy, in the subclavicular, axillary, and supra scapular regions of left side; murmur of inspiration normal, of expiration subcrepitant and prolonged, one over the inferior portions of left lung, and subclavicular and mammary regions of right. Diagnosis:—Extensive pleuritic adhesions on upper and lateral portions of left lung, abscess in its upper portion, with extensive tuberculous deposit in upper part of right lung, and lateral and inferior portions of the left. She died on the 24th June, and the foregoing diagnosis was confirmed in every particular. I avoid the details of the autopsy to save room. It might be urged, that the existence of tubercles might be inferred from the existence of the abscess, as abscess in the lungs from other causes than the softening and coalescence of tubercles is a rare event; I notice the case, as their presence appeared to me indicated some considerable time prior to the actual formation of the abscess, and their existence in places at some distance from its seat.

William Callaghan, æt. 40, an immigrant, was admitted into the Montreal General Hospital May 24th, with a pulmonary affection. No notes were taken of this case, but when examined with the stethoscope, among other signs, the normal inspirator murmur and prolonged subcrepitant expiratory one were detected in the most marked manner, over various portions of the lower and back portions of the chest. He died on the 2d June, and a general tuberculous deposit was seen over both lungs, the left lung in particular was the seat of an enormous abscess, which involved nearly the whole of its upper lobe.

Daniel Mahony, æt. 46, admitted into the Montreal General Hospital May 13th; by trade a blacksmith; had led a very irregular life; slight cough, no pain in chest, no expectoration, anorexia, bowels regular, pulse rapid, varying from 110 to 120, no dyspnœa, slight fever of a continued type. Examination of chest elicited on percussion a full resonance over the whole surface, almost as resonant as in pneumothorax; motions of ribs normal; respiratory murmur defined and normal over every part, except lateral and dorsal regions of both lungs, where the murmur of inspiration was a little less loud than normal, and that of expiration prolonged and subcrepitant; sounds from the voice natural. These signs continued until the 25th June, when they developed themselves on the superior portions of both lungs, and finally, about the 1st July, imperfect pectoriloquy was detected in the axillary and subclavicular regions of right side, the sputa being previously changed to muco-purulent. He died on the 15th July, and in an hour and an half afterwards was opened. The lungs of both sides were studded with tubercles in various stages of development. At the upper part of right lung, a small abscess had formed of irregular shape, and at the lower portion of it was found, lodged in the bronchial tubes, and moulded to the shape, a small calcareous deposit.

Since the principal part above was written, I have had an opportunity of perusing Dr. Williams' valuable treatise on Auscultation and Percussion, and perceive that he notices as pathognomic of the existence of tubercles, the prolonged expiratory murmur, coupled with the subcrepitant rale both in inspiration and in expiration, 'principally in the latter.' As to the pathological state of the air cells which induce to the normal sound in question, there can be little hesitation; but I have frequently observed the existence of the rale both in expiration and inspiration, at the termination of cases of bronchitis involving the finer bronchial ramifications and extending into the air cells. In the course of a few days, in some cases, I have seen it disappear altogether. In other cases it has taken a longer period; while every instance in which the normal inspiratory and subcrepitant expiratory have been detected, has proved fatal.

Montreal, July 24th, 1842.

Successful Treatment of an Extensive Gun-shot Wound.

TO THE EDITOR OF THE LANCET.

SIR:—

As our profession is one of active benevolence, and every case correctly reported, either of injury or disease, with its subsequent treatment, may add something to the general stock of medical knowledge, I send you the following. In the autumn of 1837, Isaac Billings, aged seventeen years, suffered from a billious remitting fever of the congestive type, before which was subdued he was considerably prostrated, During the month of December, before convalescence was fully confirmed, he imprudently went gunning to a piece of woodland about one mile distant. There, during the act of getting over an old worm fence, the upper rail of which broke, he fell, his gun being at full cock, went off, and the charge, which was principally composed of pieces of cut lead, passed through his arm, entering between the artery and the inner belly of the triceps muscle, shattering and splintering the humerus in its course, and went out above near the insertion of the deltoid, a portion of which, with its insertion, being destroyed. He managed to crawl to the nearest farm-house, distance about one fourth of a mile. Being sent for, I found my patient in a much prostrated state, pulse feeble, slow, and with a thread-like feel, his voice nearly an indistinct whisper. I administered to him a small quantity of warm cordial, had him placed on an easy litter, and conveyed home. I remained with him until reaction began, and then, after a careful examination of the injury, recommended amputation of the shoulder joint; for, on probing the wound, and afterwards passing my finger through, which I could do without difficulty, I found so much of the bone destroyed, the ends so badly splintered, I was doubtful if an osseous union would be ever effected; I stated to him also the danger of tetanus, which might set in, and the amount of suffering in one case more than the other. However, he would not listen to the proposal, but always replied, after many entreaties also by his friends, 'that his arm should accompany him to his grave.' Under these circumstances, I determined to do the best I could for him. I commenced by removing from the wound every extraneous substance I could find, among which were pieces of muslin and woollen cloth, lead, wadding, and pieces of detached bone. I got made a hollow splint for the fractured limb, on which to rest, with a suitable opening, for the double purpose of applying lint and permitting the discharge to escape. In about four days suppuration commenced, the febrile symptoms did not run high; all seemed to do well, and continued so for seventeen or eighteen days. The dressings made use of were dry lint immediately applied to the wound, over which was laid a linen rag thinly covered with resinous ointment. For the first week or so, the whole limb was kept cool by being covered with a cloth saturated with spirit and water.

About this time, seventeen or eighteen days from receiving the injury, the dischrage, from a healthy thick subsistence, began to grow thin, and in the course of two or three days, put on the appearance of whey, with minute globules of a substance like oil, mixed with or swimming through it. At this time, or about three weeks from receiving the injury, when adjusting with great care the splint before mentioned, tetanus set in, and continued for half a day, with intermissions. I availed myself of a moment of ease, and introduced between his teeth a piece of good white-oak, of convenient shape and size, in order to preserve the tongue from injury. The spasm of the jaws remained permanent for eleven days, without intermission, the wood remaining all this time between his teeth. It had now become reduced in size, and appeared as if squeezed in a vice, but it still kept the teeth separated, so that food and medicine could be conveyed to the stomach. About this time, five weeks from receiving the injury, the spasms began to give way, and intermitted for six days, with every day a longer interval of ease, then finally ceased altogether, and did not return.

When tetanus first commenced, I gave one fourth of a grain of morphine every two or three hours, and every six hours I gave twenty drops of tinct. muriatis ferri, mixed with water, to which I occasionally added musk, castor, valerian, assafœtida, camphor, &c.; nor did I perceive that any of the last named antispasmodics had the least effect. Every eight hours I allowed a small quantity of Albany ale; his food, arrow root, sago, tapioca, preparations of rice, and beef tea. The alvine evacuations were kept free by laxative enema. During the first two weeks from the commencement of tetanus, the least noise, such as moving the handle of the door, walking over the room, rustling a piece of paper, would bring on frightful contractions of both lower extremities and the injured arm; his heels would be drawn up to his back, and the upper fractured end of the humerus would be forced through the integuments, the convulsive action of the muscles forcibly drawing up the lower part. To guard as much as possible against this, I fixed the shoulder to a piece of wood of suitable form, well cushioned and made fast to the side of the bedstead, and counter extension of the forearm and lower part of the arm, was kept up by rollers securing the arm to the fixture. About the eleventh day from tetanus commencing," he had for three days almost continued hiccough, which resisted the administration of antispasmodics in almost every combination. It was finally relieved by the use of lime water. When the spasms began to abate I attempted to remove the splintered ends of bone, some of which protruded an inch or more, but the least touch of a fine saw, or bone forceps, would bring on with renewed force the spasmodic twitchings. I therefore desisted from any further attempts, only attending to the daily dressings, and nature accomplished the removal by exfoliation. I was also careful to keep the ends of bone as much as possible in juxtaposition.

During the period from receiving the injury to the completion of the cure, forty-seven pieces of bone came away, some of which were an inch in length. For twenty-one weeks he was confined to one position in bed, and for four weeks more he was bolstered up in bed; after which he was placed during the day in a chair, with a rest for the fractured limb. About this time the last piece of bone came away, and I was obliged to use caustic and astringent washes, to keep down exuberant granulations. His strength from this time improved rapidly, the bone became firm by complete osseous union; his shoulder joint, together with the free motion of the rest of the limb, is perfect. The arm is now straight, but is from three and an half to four inches shorter than the other. He is at present employed in the wire drawing department of the card factory in this place, and manages his part without difficulty.

Yours, &c.,

W. Magee, M. D.

Paterson, N. J., July 26th, 1842.

TO THE EDITOR OF THE LANCET.

Dear Sir:—

Should you deem the following case worthy an insertion in the 'Lancet,' you have my permission to publish it. The stand you have taken in regard to an extension of the time of collegiate medical education, you may rest assured will find favor in the eyes of all honorable men in the profession. I am much pleased with the character and contents of the Lancet, and shall put myself to some trouble to extend its circulation in this vicinity.

Respectfully,

Charles C. Hildreth, M. D.

Zanesville, O., July 28th, 1842.

Case of Poisoning by Arsenic.

John Morris, mulatto, æt. 23, of melancholy temperament, and probably insane, attempted suicide by arsenic Oct. 9, 1841. Two years previously, while residing in Wheeling, Va., he had attempted self-destruction by hanging, but was accidentally prevented. On the plea of killing rats, he procured nearly an ounce of arsenic, at Mr. W.'s drug-store, Main street, Zanesville, returned to his boarding-house, swallowed it dry, (as he afterwards confessed) and then drank as largely as possible of water, supposing it would kill him instantly. The paper which contained the medicine, (and which was very properly labelled 'arsenic, poison,' by the druggist,) he very carefully put back in his pocket, that his friends, on finding his dead body, might the more readily account for his death. After taking the arsenic he ate a little supper, and then went out and vomited as he was walking along the street. Getting very sick, he stopped at the house of Mrs. Cook, from whom I received the following statement of his case up to the time of my first visit.

He complained of a great deal of pain in the epigastric region on coming into the house, walked the floor constantly, said he was burning up alive, and suffering the torments of the damned in his stomach. Soon after coming in he vomited, but threw up water only. By a little persuasion she obtained from him a confession that he had taken a large dose of arsenic, for which he expressed much regret, chiefly I presume on account of the pain which he suffered. He then gave her the paper which had contained the poison, said he had taken the whole of it, and then drank largely of water. He had vomited four times before I saw him, three of which were at the house of Mrs. Cook. On the fourth attempt, he threw up what was supposed to be arsenic in substance, combined with some of the contents of the stomach. This was preserved for inspection on analysis. The patient continued to walk the floor as long as he could stand, and then threw himself on the bed, over which he rolled in agony. A fit of epilepsy (to which he had been subject) came on soon after, also great rigidity of the muscular system. His extremities became cold, and his pulse much depressed in force.

Being absent from home when first sent for, I did not see the patient until 8 P. M., or two hours after the arsenic had been taken. Found Dr. C. in attendance, who had very judiciously directed a combination of milk, flour, and albumen of eggs, before my arrival. At my suggestion a messenger was sent immediately for the proper antidote for arsenic, viz., the hydrated peroxide of iron. If this could not be had instantly, the apothecary was requested to send two ounces of the sesquioxide or precipitated carbonate of iron. The latter only was received, and was given in doses of half a table spoonful every fifteen minutes, suspended in the combination of milk, flour, and albumen, above referred to. The vomiting continued at short intervals, so that there was no demand for the stomach pump. His thirst was intense. Cold water was eagerly demanded, but it was thought most prudent to restrict him entirely to the milk, &c., of which he took at least half a gallon during the night. When the two ounces of the sesquioxide were given, four more of the same were procured, and given in the same manner. In all, six ounces of the precipitated carbonate were taken between 8 P. M. and 2 A. M., at which time the vomiting ceased in a great measure. A large dose of castor oil was directed as soon as the stomach would retain it.

Sunday morning, Oct. 10.—The patient still complains of intense burning sensations through the mucous membrane of the mouth, æsophagus, and stomach; has also occasional nausea and vomiting. In addition to these symptoms he has considerable febrile reaction, tenderness on pressure over the epigastrium, violent pain in the head, occasional delirium, injection of the blood vessels of the conjunctiva, and every indication of gastric and cerebral inflammation. The pulse justifying the measure, he was bled to syncope, cupped liberally over the epigastrium, and afterwards blistered. The cold dash was frequently applied to the head, followed by ice; and a blister to caput nucha. Ice and mucilage of elm we taken liberally into the stomach, and afforded much relief to the patient from the burning sensations and intense thirst. The castor oil operated frequently during the day, bringing down a large quantity of the iron unchanged in appearance.

On Monday we found the patient better in all respects; but at 1 P. M. he had another paroxysm of epilepsy. The secretion from the kidneys was nearly the same color of the precip. carbonate, which tinge was supposed by the nurse to be derived from the iron, but was no doubt the result of the local inflammation present. The same plan of treatment was continued; castor oil again exhibited, and ice and mucilage, taken *ad libitum*.

On Tuesday his urgent thirst disappeared, together with the signs of acute inflammation in the organs affected.

On Wednesday he was decidedly convalescent, and returned to his boarding-house.

About three months after this time, the patient having arrived at the conclusion that dying by arsenic was not the most agreeable method ever discovered, thought he would try the influence of cold water; and in the presence of fifty witnesses threw himself into the canal at Zanesville, and in spite of the efforts of his friends effected suicide by drowning.

Remarks.—In this case, the chain of evidence in regard to the swallowing of a very large dose of arsenic is quite perfect. The poison was procured of an apothecary about an hour before it was taken. The apothecary acknowledges the sale to the patient; who again confesses the time, place, and manner of taking it. His partial insanity, his previous and subsequent attempts at suicide, and the symptoms produced by the medicine, all go to confirm the truth of his confessions. The suspected matter vomited (which amounted to one or two fluid ounces) had all the external appearance of arsenic in coarse powder, combined with a little farinaceous matter. A portion of this powder was thrown upon heated iron, and gave off a distinct alliaceous odor. The tin basin into which the patient vomited (and which happened to be new) was acted upon chemically by the arsenic, during the twelve or fifteen hours that it remained in it. Several dark spots of arsenite of tin or iron were found indelibly and permanently fixed upon it. The reproduction of metallic arsenic, by sublimation of the suspected matter in a glass tube, could no doubt have been readily effected; and I now regret that the contents of the basin were lost before the most accurate tests were applied.

I report the case in illustration of the powers of the precipitated carbonate of iron as an antidote for arsenic. Its efficacy is no doubt owing to the hydrated sesquioxide which it is found to contain, but its virtues as an antidote are of necessity much less than those of the recently prepared hydrated peroxide. Observation and experiment prove, that the peroxide, whether in the dry state or that of hydrate, if kept any considerable length of time, loses its efficacy. The recently prepared article, then, should only be given, and that this may be obtained in the shortest possible time, the plan proposed by Proctor should be adopted by our apothecaries, viz. to keep constantly on hand a solution of the persulphate of iron, from which the hydrated peroxide may be obtained in a few moments, by the addition of its own weight of water, and a slight excess of solution of ammonia to precipitate the oxide. Were it made compulsory by law, upon all those who sold arsenic, to keep its proper antidote in readiness, we should have but few deaths from this cause. But as such just and wholesome legal enactments cannot be expected in a country where the proper study of anatomy is punished by imprisonment in the penitentiary, we must have other remedies in reserve. Of these perhaps the best is the precipitated carbonate. In the case reported above, six ounces were given in a very few hours. The greater part of this was rejected by vomiting, and the balance passed off by the bowels, much of it unchanged in appearance. Nearly an ounce of arsenic was in this case taken into the stomach, if the statement of the druggist and the confessions of the patient are to be credited. Much of this was no doubt thrown up; yet from the violence of the symptoms, no small amount of it must have been retained. Such being the fact, we have good reason to be pleased with the efficacy of the precip. carbonate as an antidote. In another instance coming under my observation, in which two tea spoonfuls of 'Fowler's solution' were taken into the stomach of an adult by mistake, the exhibition of an emetic, and liberal use of the precipitated carbonate prevented all injurious consequences.

Laceration of the Capsule for the Removal of Capsular Cataract.

BY MIDDLETON GOLDSMITH, M. D.,

Prosector in Surgery, College of Physicians and Surgeons, New York.

[FOR THE NEW YORK LANCET.]

J. A., æt. 29, a healthy young man, appeared, May 5th, with a cataract in the left eye; on examination it proved to be capsulo-lenticular. On the 6th, I operated through the cornea (an operation which I always prefer, when the case will in any way admit of it). The first free incision into the capsule allowed the greater portion of a fluid milky lens to escape into the anterior chamber. Twelve days afterwards, the lens having disappeared, I proceeded to the second step in the mode proposed, which consisted in introducing the needle as in the preceding operation, and with the pupil well dilated, to separate the capsule from its adhesion to the hyaloid through about four-fifths of its extent, leaving it adherent at its lower part, and then with the point of the instrument, placing it behind the iris. The eye was closed, the patient kept upon the usual regimen, and in about two weeks the capsule had diminished so much as to remain as a shred, which could be seen only when the pupil was somewhat dilated. I have since operated twice for capsulo-lenticular cataract; in both cases the lens were solid, and in breaking them up I was obliged to divide the capsule so freely, that I could not perform the second part of the operation. But in both of these I destroyed, as far as I could, the centre of the capsule by free incisions, so that the divided edges gradually disappeared; at least so much so as not to interfere with ordinary vision. I think that in these two cases the result was nearly as favorable as, and attended with none of the danger of the operation for extraction, which is usually resorted to for an opaque capsule.

Scriveners' Spasm cured by Division of Muscles.

BY PROFESSOR STROMEYER.

The disease which may be familiarly called scriveners' spasm, and consists of permanent contraction of the long flexor of the thumb, is not very rare. Several cases have been published in Germany by Albers, Heyfelder, and Kopp; and in France by Cazenave and David. The chief characteristic of this affection is an absolute incapability of using the pen, for writing, although the strength and motions of the hand remain unimpaired for all other purposes. Some authors regard it as a species of spasm; others, as depending on paralysis; it is generally permanent, but occasionally appears at intervals, and then is commonly brought on by long continued use of the pen. This affection, though apparently slight, is most obstinate, and resists every method of treatment that has hitherto been employed against it. The following cases, which we abridge considerably, had baffled the skill of Professor Stromeyer, until he had recourse to division of the flexor muscle, which was attended with complete success.

Case I.—J. M., a public writer at Hanover, labored under this disease during two years. A celebrated physician had tried every kind of remedy without avail.—Whenever he began to write, the muscles of the ball of the thumb were seized with spasm, which compelled him to desist, but the spasms did not appear at any other time. M. Stromeyer also tried a variety of means ineffectually, and then divided the small flexor muscles of the thumb. This likewise failed, and the sensibility of the palmar surface of the thumb was destroyed. It was now clear that the action of writing depended on the long flexor, but the patient refused to permit any more operations to be performed on him.

Case II.—The subject of this case had suffered under the disease for fifteen years, when first seen by M. Stromeyer. The rigidity of the muscles of the ball of the thumb was not, however, present, but the last phalanx of the thumb became suddenly flexed, whenever the patient attempted to write or play on the piano.

The long flexor was not permanently contracted, nor did it impede any other motions of the hand. From the deep situation of the muscle it was not easy to divide it separately. M. Stromeyer bent the first phalanx strongly to a right angle, and at the same time turned the thumb as much out as possible; he then passed a very small, curved tenotome underneath the tendon, and divided it. The sensibility of the thumb was very considerably diminished after the operation, but was restored, on the dorsal aspect the next day, and on the palmar aspect within a fortnight. The natural power of moving the thumb, also, returned at the latter period, and the patient was able to write or play on the piano without the slightest return of the spasm.—*Arch. Gen. de Med.*

Catarrh of the Bladder.

In the last volume of his excellent treatise on diseases of the genito-urinary organs, M. Civiale makes some observations on the treatment of catarrh of the bladder by injections, which are worthy of the attention of practitioners. M. Civiale assures us that he has obtained the best results from this mode of treatment in cases of chronic catarrh. The object of injections is to remove the urinary deposits from the bladder, modify the sensibility of the organ, and restore its contractile power.

Simple water should be used at the commencement, either tepid or cold, according to circumstances, and the injections are to be continued as long as the urine contains any deposit, and the bladder remains weak.

Immediately after a natural evacuation of the urine, a catheter should be passed into the bladder to ascertain whether all the urine has been expelled, and whether the portion which may remain contains any deposits or not. This done, some tepid water must be slowly injected into the bladder, and after a very short sojourn there, allowed to flow away. The same operation must be repeated every day, unless the urethra and bladder show some signs of irritability, when it may be suspended for a day or two. Generally speaking, in from three to eight days the patient is able to make water more easily, and the urine contains less sediment.

Two injections are now made, one upon the other. While the first is flowing away, the syringe is filled again, and a second injection thrown into the bladder. Should the expulsive power of the organ be extremely feeble, three to five injections may be thus made, one on the other, and the temperature of the fluid gradually reduced. The best indication of the number of injections to be employed, and the temperature of the water, is the manner in which the fluid escapes from the bladder. At first it merely dribbles away, but as soon as we find that it is expelled by the contractions of the bladder, we must cease to increase the number of injections, and to diminish their temperature.—*Prov. Jour.*

Polypi of the Rectum in Children.

Professor Stolz has published in the Gazette Médicale of Strasbourg, a pamphlet on polypi of the rectum in children. This disease, he says, occurs from time to time, and has almost never been taken notice of by any of those authors who have written on diseases of children, having been taken for a prolapsus of the gut. The case which first occurred to him was in a boy five years old, and presented the following symptoms:—For eighteen months he had had frequent desire to go to stool; and for a year, at each time that he went, he had passed a red and bloody tumor, which in about five or ten minutes returned of itself. His parents, and several medical men who were consulted, believed that he labored under prolapsus of the rectum. Professor Stolz at first was of the same opinion, and various injections were accordingly ordered. After several weeks, upon examining him minutely, he discovered that it was not a prolapsus, but a tumor of the size of a small nut, and covered with a bloody mucus, which was protruded. It was attached not very high up the gut, by a pedicle of about the thickness of two millimetres to the mucous membrane of the rectum. A ligature of silk was accordingly put round it and tied. In three days it came away; no bad symptoms followed, and the child, who had been in bad health previously, from loss of blood, soon recovered his strength. Two other cases have occurred to the Professor since, and he has heard from his colleagues of several more. In one of the cases which he had, he removed the tumor by means of scissors. No blood followed at the time; but in about two hours after there was copious hæmorrhage, which put the patient's life in danger. The bleeding was arrested by compresses dipped in cold water, and by cold injections. The child made a good recovery, and soon regained his strength.

This last case is another example of the danger of making any incision in the rectum, or even in its neighborhood, without carefully plugging the wound afterwards.—*Edinburgh Monthly Journal.*

Efficacy of Oxide of Zinc Ointment in Certain Diseases of the Skin.

M. Martin-Solon has published some remarks on the efficacy of this ointment in the treatment of eczema, ecthyma, and impetigo. The ointment is composed of one to three parts of oxide of zinc, rubbed up with thirty parts of lard, and is used night and morning. The strong ointment may be employed when the cutaneous affection has partially disappeared, and all irritation of the skin been removed. M. Martin-Solon recommends this ointment especially for eczema. Whether the disease occupies an extensive surface of the body, or is confined to certain parts, the use of this remedy almost always removes the unpleasant itching and discharge, and procures a rapid re covery; more particularly if aided by long continued amylaceous baths. In some cases of excoriation and fissures of the nipples, and vulva, this remedy has likewise produced the best effects.—*Journal de Med. Pratique.*

Treatment of Paraphymosis.

The incision of the stricture in paraphymosis, is pretty generally practised by surgeons, except when this disease occurs in children, and in such the reduction is often effected by pressure. I have seen repeated incisions fail of relieving the stricture, and leave foul and intractable sores, which have been extremely tedious and difficult to heal. I have always succeeded in reducing a paraphymosis, either in an adult or child, however long standing, without having recourse to the knife, by the following method:—I place the patient against a wall, and take care that he is steadily supported by an assistant on each side; a piece of linen cloth is then laid over the glans, and with my thumbs I knead the blood out of it, drawing the prepuce forwards at the same time with two fore fingers of each hand. A steady perseverance in this plan never fails, and, although the operation is a painful one, the patient is amply rewarded by the rapidity of the cure, which requires nothing more than the application of a saturnine lotion for two or three days.—*Mr. Toogood in Prov. Journal.*

Iodine Injections for Serous Cysts.

Serous cysts are frequently found on the neck, in front of the different joints, in the mammæ, &c. Instead of extirpating them, M. Velpeau proposes the following method of treatment :—A trochar having been passed into the cyst, and the fluid drawn off, an injection of one-third of tincture of iodine to two-thirds of water is thrown in ; this is allowed to remain in the sac but a few seconds, and then passed out again, a small quantity being suffered to remain behind. The tumor soon becomes painful, but absorption commences in a few days, the tumor diminishes, and shortly disappears altogether. M. Velpeau has employed this mode of treatment with excellent effect in various cases of encysted tumor. It should be observed, however, that frequently three weeks or a month will pass over before the cysts are completely obliterated.—*Journal de Med. Pratique.*

THE COLLATERAL SCIENCES.

The Crystalline Lens.

M. Schwann thinks, that the lens is at first composed of cells, which are afterwards converted into fibres. Mr. Toynbee has not only found cells interspersed among its fibres, but has frequently seen the fibres themselves composing the external part of the lens, made up of these cells; and in other instances they occupy the margin of the fibres only.

Speaking of the blood-vessels of the lens, Mr. Toynbee says—'I have not only been unable to trace vessels into the anterior capsule, but I hope to prove that in the healthy state no vessels do enter it. The posterior capsule of the lens is, however, injected with facility, and contains large and numerous ramifications of blood-vessels; I ascribe to them the function of supplying the crystalline lens with a nutrient fluid. These vessels arise from the arteria centralis retinæ ; the latter, having traversed the centre of the vitreous humor, expands upon the capsule, and forms the ramifications just noticed. Now in some injections which I have made of the eyes of a human fœtus, of the sixth or seventh month, these vessels were not confined to the posterior surface of the capsule ; they pass round its border and extend upon its anterior face to the extent of one quarter of a line. I have not been able to make a perfect injection of the vessels of the capsule of the lens in ages antecedent to the fifth or sixth month of the fœtal life, and therefore am unable to say whether, in the very early periods of development, the anterior capsule, like the membrana pupillaris, is entirely traversed by vessels ; the crystalline lens would, under such circumstances, be completely surrounded with blood-vessels.

The branches of the arteria centralis retinæ in the early periods of life, as noticed above, extend upon the anterior surface of the capsule. Immediately they reach the latter they become straight, run parallel with each other, and are directed towards the centre of the anterior surface for the distance of a quarter of a line, when they stop in their course, and form looped dilatations, which give origin to small veins. It is most probable that these vessels recede at subsequent periods of development, so as to leave the whole of the anterior surface of the capsule capable of being permeated by the rays of light. These vessels, in a diseased state, are sometimes prolonged into the whole of the anterior capsule, (or to speak with more propriety, the anterior half of the capsule,) where, in morbid specimens, they have been injected by Schroeder Van der Kolk. The capsule of the lens is thus pervaded by large and numerous ramifications of blood-vessels, which I believe pour out upon its inner or lenticular surface a nutrient fluid ; this fluid will immediately come in contact with the mass of delicate cells described by Schwann as situated between the lens and the capsule.' Mr. Toynbee supposes that the nutrition of the lens is effected by these cells receiving the elements of the blood, and conducting them to the lens, through which they are diffused.—*Med. Chir. Rev.*

ITEMS AND INTELLIGENCE.

Medical Science of Missouri.

Amongst the evidences of the onward progress of this state, is the organization of a State Medical Society. The Legislature has thus given a splendid exhibition of the wisdom of its councils, in chartering an institution which contemplates the preservation of the public health, almost in the commencement of its own existence. The Society was incorporated in 1837, though instituted two years before. Meredith Martin, M. D., is President, and the Corresponding Secretary is James Sikes, M. D.

Award of Prizes.

The French Academy of Sciences have awarded to M. Tanquerel-des-Planches, a prize of six thousand francs for his work on diseases caused by lead ; and another of four thousand to M. Amusat, for his researches on the introduction of air into the veins.

To Correspondents.

A number of papers will be duly attended to.

Dr. Dowler's 'Maxims' are rather prolix.

'Phi.' We do not think it necessary, at present at least, to refer to this paltry slander. We will not obtrude personal matters on the readers of the Lancet.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending July 30, 1842.

42 Men, 37 Women, 79 Boys, 59 Girls. Total, 217.

DISEASES.

Apoplexy	3	Intemperance	0
Asthma	0	Inflammation	0
Asphyxia	0	Of liver	2
Abscess	1	Of bladder	2
Aneurism	0	Of brain	3
Bleeding	1	Of stomach	3
Bleeding from stomach	0	Of chest	2
Bleeding from uterus	0	Of lungs	7
Burned or scalded	1	Of bowels	8
Cancer	1	Of heart	1
Cholera infantum	44	Of kidneys	1
Cholera morbus	0	Insanity	1
Constipation	0	Jaundice	0
Consumption	29	Killed or murdered	0
Convulsions	22	Lues Venera	0
Croup or hives	0	Mortification	0
Debility	3	Malformation	1
Delirium tremens	1	Marasmus	12
Diabetes	0	Measles	4
Diarrhœa	3	Old age	0
Death from poison	0	Organic disease of heart	0
Dropsy	6	Palsy	1
Dropsy in head	8	Rupture	0
Dropsy in the chest	2	Rheumatism	0
Drowned	3	Spinal disease	2
Dysentery	3	Suicide	1
Erysipelas	0	Sprue	0
Epilepsy	0	Small-pox	0
Fever	2	Scrofula	2
Scarlet	4	Teething	6
Typhoid	2	Tumor	0
Puerperal	2	Unknown	1
Remittent	1	Ulceration of throat	1
Bilious	0	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	3
Fracture	0	Worms	1

John H. Griscom, City Inspector.

City Inspector's Office, July 30, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, AUGUST 13, 1842. No. 7.

DO THE VARIOUS RACES OF MAN CONSTITUTE A SINGLE SPECIES?

BY SAMUEL FORRY, M. D., NEW YORK,

Author of 'The Climate of the United States,' &c. &c.

No. II.

We have now reached the main object of the inquiry before us—*Do the various races of man belong to a single species?* In the general classification of mankind, we find that nearly every author has some peculiar views. Thus, whilst Cuvier makes the distinction of three races, Malte-Brun has no less than sixteen. As the division of Blumenbach, consisting of five varieties, viz., the Caucasian, Mongolian, American, Ethiopian, and Malay, is the one most generally adopted, it may be well to present here their general distinguishing characters. Among their principal characteristics, those of the skull are most striking and distinguishing. It is on the configuration of the bones of the head that the peculiarity of the countenance chiefly depends.

In the *Caucasian* race, the head is more globular than in the other varieties, and the forehead is more expanded. The face has an oval shape nearly on a plane with the forehead and cheek-bones, which last project neither laterally nor forwards as in other races; nor does the upper jaw-bone, which has a perpendicular direction, to which the lower jaw corresponds, give a projecting position to the front teeth, as in the other varieties. The chin is full and rounded. The skin may be described as generally fair, but it is susceptible of every tint, and in some nations is almost black; and the eyes and hair are variable, the former being mostly blue, and the latter yellow or brown, and flowing. It is the nations with this cranial formation that have attained the highest degree of civilization, and have generally ruled over the others; or, rather, as we will attempt to show more fully, it is among these nations that the progress of civilization and the development of the anterior portion of the brain, each exercising on the other a mutual influence, have gone hand in hand. Of this variety of the human race, the chief families are the Caucasians proper, the Germanic branch, the Celtic, the Arabian, the Lybian, the Nilotic, and the Hindostanic.

In the *Mongolian* variety, the head, instead of being globular, is nearly square. The cheek-bones project from under the middle of the orbit of the eye, and turn backwards in a remarkable outward projection of the zygoma. The orbits are large and deep, the eyes oblique, and the upper part of the face exceedingly flat; the nose, the nasal bones, and even the space intermediate to the eye-brows, being nearly on the same plane with the cheek-bones. The color of this variety is olive or yellowish brown, and the hair is blackish and scanty. This variety of the human family has formed vast empires in China and Japan, but its civilization has been long stationary.

The *Ethiopian* variety, which recedes the farthest from the Caucasian, presents a narrow and elongated skull, the temporal muscles, which are very large and powerful, rising very high on the parietal bones, thus giving the idea of lateral compression. The forehead is low and retreating. The cheek-bones and the upper jaw project forwards, and the alveolar ridge and the teeth take a similar position. The nose is thick, being almost blended with the cheeks; the mouth is prominent and the lips thick; and the chin is narrow and retracted. The color varies from a deep tawny to a perfect jet; and the hair is black, frizzled, and woolly. It is not true, as is remarked by M. Cuvier, that the people composing this race have always remained in a state of barbarism. On the contrary, we will adduce facts showing that many negro tribes have made considerable advances in civilization, and that in proportion to this improvement do they approximate to the physical characters of the Caucasian.

These three constitute the leading varieties of mankind, the American and Malay being no more than mere intervening shades. In the *American* race the head is less square and the face less flattened than in the Mongolian. The color resembles that of copper, and the hair is black, thick and straight. 'Although the Americans,' says Morton, 'possess a pervading and characteristic complexion, there are occasional and very remarkable deviations, including all the tints from a decided white to an unequivocally black skin.' This race was originally spread over nearly the whole of the Americas south of the sixtieth degree of north latitude. From this point, towards the Arctic circle, our Indian manifestly belongs to the Mongolian variety; from Greenland, we trace the same family of men to the north of Europe, comprising the Finland and Lapland coasts; and thence to the polar races of Asia, which are part of the Mongolian tribes, covering the immense region extending from the line of the Ural and Himmaléh mountains to Behring's Straits.

As the American variety seems to form a middle point between the Caucasian and Mongolian, so may the *Malay* be said to hold a similar relation to the Caucasian and Ethiopian. The forehead is more expanded than in the African, the jaws are less prominent, and the nose more distinct. The color is blackish brown or mahogany, and the hair is long, coarse, and curly. This variety is found in New South Wales and the South Sea Islands in general.

To these great races, more especially the first three, it has been customary to refer all the ramifications of the human family. Taking the country of the Georgians and Circassians as the radiating point of the Caucasian race, we may trace out its principal branches by the analogies of language. The Armenian or Syrian division, directing its course to the south, gave birth to the Assyrians, Chaldeans, and untameable Arabs, with their various subdivisions. In this branch, science and literature have occasionally flourished, but always under fantastic forms. Another division embraced the Indian, German, and Pelasgic branch, in whose four principal languages we recognize a striking resemblance. The first is the Sanscrit, now the sacred language of the Hindoos; the second is the Pelasgic, the common mother of the Greek and Latin, and of almost every language now spoken in the south of Europe; third, the Gothic or Teutonic, from which arose the German, Dutch, English, Danish, and Swedish languages, and their dialects; and fourth, the Sclavonian, from which are derived the Russian, Polish, Bohemian, &c. This division is the most respectable branch of the Caucasian variety; for among them have philosophy, the arts and sciences, been carried to a degree of perfection unknown to any other race. This subject, by tracing out the analogies of language, has been followed up into its minutest ramifications. Much credit is due to Prichard for his indefatigable researches in this respect in reference to Europe, Asia, and Africa ; but it too often happens that the affinities of language in the last two are not sufficiently known to lead to undoubted results. Among the American variety, it has been generally believed that the languages are as innumerable as the tribes, it being impracticable to establish any analogies among them, or with those of the eastern continent ; but this opinion is manifestly founded in error. 'With respect to the American languages,' Morton says, 'it may be sufficient in this place to observe, that they present resemblances not less remarkable than those we have noticed in the physical and moral traits of these people.' (p. 85.) This analogy, it would seem, is not of an indefinite kind. It consists mostly in peculiar conjugational modes of modifying the verbs by the insertion of syllables. The supposed infinite variety of North American tongues has been reduced by the late researches of Dr. Heckewelder and other American archaiologists, to three or four radical languages; and the belief in the affinities between these languages and those of Eastern Asia has been strengthened by the researches of Klaproth and other German philologists. This affinity with the people of Eastern Asia, it may be here added, is confirmed by the inferences drawn from physiognomy. Thus Sidi Mellimelli, Tunisian envoy to the United States in 1804, on seeing the deputies of the Cherokees, Osages, and Miamis, assembled at Washington city, was instantly struck with the resemblance between their general physiognomy and that of the Asiatic Tartars.*

But the question still recurs—*Whence proceed the remarkable diversities observed among the different nations of the earth ?*

If we pursue an analogical mode of investigation in reference to the various branches of the human family, we will arrive at certain results, the aggregate of which will throw much additional light upon the question, whether they all belong to a single species. These conclusions will now be summed up under distinct heads.

From an extensive survey of various nations in reference to the proportionate duration of human life, it is evident that there exist no well-marked differences in this respect among the different families of man. If the comparison, however, is extended to the simiæ, notwithstanding they approximate to man very closely in physical structure, the contrast is very great. The greatest longevity of the troglodyte is not more than thirty years. As we discover no difference in this respect between the Negro and the European, there is little ground for introducing, as was done by Linnæus, Buffon, Helvetius, and Monboddo, the ourang-outang into the human family. Moreover, we find as attributes common both to the Negro and the European, the erect attitude, the two hands, the slow development of the body, and the exercise of reason. On the other hand, the whole structure of the monkey, who is four-handed, proves that to him the erect attitude is not natural. The striking characteristics of the predominance of the fore-arm over the upper arm, and the great length of the upper and shortness of the lower limbs, are peculiarly adapted to his climbing habits. How beautifully is the majestic attitude of man, which announces to all the other inhabitants of the globe his superiority, described in the words of Ovid :—

> Pronaque cum spectent animalia cetera terram,
> Os homini sublime dedit ; cælumque tueri
> Jussit ; et erectos ad sidera tollere vultus.†

In regard to the principal phenomena of physical life, such as the progress of corporeal development, the periodical phenomena of the constitution, and those other processes termed by physiologists the natural functions, the opinion is warranted, from a comprehensive view of the question, that there is no marked difference among the different races of mankind.

The pathological history of the different races constitutes as much a part of their physical description, as any feature in their anatomical structure. From a survey of the facts connected with this question, it appears that the whole human family, making due allowance for endemic influences, are equally subject to those ills which 'flesh is heir to,' thus confirming the doctrine that a common nature pertains to mankind. This comparison is based on the fact that certain diseases are peculiar to man, a list of which has been made out by Blumenbach.

An identity of species between two animals, notwithstanding a striking difference in some particulars, has been inferred, as a general rule, if their offspring has been found capable of procreating. Although this doctrine has been generally maintained by our most distinguished naturalists, yet some have rejected it as a hasty generalization. The production of hybrids is a phenomenon observed not only among mammifers, but among birds, fishes, the insect tribes, and the vegetable kingdom ; and when we survey the numerous facts opposed to the generally admitted law of nature that all hybrid productions are sterile, there would seem to be some ground for doubting the soundness of the general conclusion. Thus the dog and the wolf, and the dog and the fox, will breed together, and the mixed offspring is capable of procreation. And that mules are not always barren, is a fact not unknown even to Aristotle. But as hybrid productions are almost unknown among animals in their wild and unrestrained condition, it would seem that there is a mutual repugnance between those of different species; and thus nature guards against a universal confusion of the different departments of organized creation. Notwithstanding the occasional exceptions to the general fact of the sterility of hybrid productions, it has never been observed that an offspring similar to themselves has proceeded from hybrids of an opposite sex. It is thus apparent that the *vis procreatrix* between different species, both in the animal and vegetable kingdoms, is very defective, and that the law of nature which maintains the diversity of tribes in the organized world, is not really infringed by the isolated phenomena observed in reference to hybrid productions. That animals generally have the same form and endowments now as at the remotest period of our acquaintance with them, is an opinion confirmed by the oldest historical records, as well as by the works of art and the actual relics found in Egyptian tombs. The zoological descriptions of Aristotle, composed twenty-two centuries ago, are still faithful to nature in every particular. Hence it would appear that insurmountable barriers to the intermixture of species, at least among wild animals, have been provided by nature, in the instinctive aversion to union with other species, in the sterility of hybrid productions, and in the law of the reproduction of the corporeal and psychical characters of the parent in the offspring.

These facts have an important bearing upon the doctrine that mankind constitutes a single species. It is well known to horticulturists and those engaged in breeding domesticated animals that, by crossing and intermixing varieties, a mixed breed superior in almost every physical quality to the parent races is often produced ; and it has also been observed that the intermixture of different races of the human family has produced breeds physically superior, generally speaking, to either ancestral race. Now, as it is a law, according to the high authority of Buffon and Hunter, that those animals of opposite sexes, notwithstanding some striking differences in appearance, whose offspring is equally prolific with themselves, belong to one and the same species, it follows that these facts afford a strong confirmation of the conclusion deduced from many others, viz., that there is but one human species; for, as just remarked, whilst the offspring of distinct species (real hybrids) are so little prolific that their stock soon becomes extinct, it is found that the mixed offspring of different varieties of the same species generally exceeds the parent races in corporeal vigor and in the tendency to multiplication. This law, however, does not apply to the moral and intellectual endowments; for we find these deteriorated in the European by the mixture of any other race, and, on the other hand, an infusion of Caucasian blood tends in an equal degree to ennoble these qualities in the other varieties of the human family.

---

* There is nothing in the relative position of America that forbids the supposition of an eastern origin of its aborigines. Navigators have often picked up frail boats in the ocean, containing people who had been driven five hundred, one thousand, and even one thousand five hundred miles, from their homes.

† And while all other creatures to the dust
Bend their low look, to man a front sublime
He gave, and bade him ever scan the skies,
And to the stars lift up his lofty gaze.

Before proceeding to the consideration of the diversities exhibited among the various tribes of mankind, we will bring under notice what may be called *accidental* or *congenital* varieties. Among all organized productions, we find variety of form and structure in the same species, and even in the offspring of the same parents; and what is equally remarkable, we discover a tendency to perpetuate in their offspring all individual peculiarities. This constitutes an exception to the general law that animals produce their like,—an exception by which it were easy to explain the present existence of diversified races, originating from the same primitive species, did not a new difficulty arise in the question, having reference to the extent of deviation of structure that may take place without breaking in upon the characteristic type of the species. There are many instances on record in which these accidental varieties have been perpetuated by hereditary transmission. One of the most extraordinary is the recent origination of a new variety of sheep in New England, called the '*ancon* or *otter breed*,' in consequence of the shortness of the limbs and the greater proportionate length of the body, the fore legs being also crooked. A male lamb produced by a ewe of the common kind, was the first ancestor of this breed; and his offspring often exhibited the same peculiarity of organization. Finding the animal unable to jump over fences, the propagation of the breed became a desirable object. That the breed is permanent appears from the following facts, communicated to the Philosophical Transactions for 1813, by Col. Humphreys:—

'When both parents are of the otter breed, their descendants inherit the peculiar appearance and proportions of form. I have heard but of one questionable case of a contrary nature.

'When an otter ewe is impregnated by a common ram, the increase resembles wholly either the ewe or ram. The increase of a common ewe, impregnated by a ram of the new breed, follows entirely the one or the other, without blending any of the distinguishing and essential peculiarities of both.

'Frequent instances have happened where common ewes have had twins by otter rams, when one exhibited the complete marks and features of the ewe, the other of the ram. The contrast has been rendered singularly striking when one short-legged and one long-legged lamb, produced at a birth, have been seen sucking the dam at the same time.'

Among instances of variety of structure originating in the race of man, which are in like manner propagated through many generations, may be mentioned the oft-observed fact of supernumerary toes or fingers, and corresponding deficiencies. Hence the names of Varus and Plautus among the ancient Romans. Likewise those peculiar features by which the individuals of some families are characterized; as, for instance, the singular thickness of the upper lip in the imperial house of Austria, which was introduced, three centuries ago, by intermarriage. These organic peculiarities are often transmitted to children, even when one of the parents is of the ordinary form, for three and four generations. Hence there is reason to believe that if persons of this organic peculiarity were to intermarry exclusively, we might have a permanent race characterized by six toes or fingers. We have a similar fact in the history of the English family of 'porcupine men,' in whom the greater part of the body was covered with hard excrescences of a horny nature, which were transmitted hereditarily. These remarks apply equally to those peculiarities of organization which predispose to many diseases, as well as to the transmission of mental and moral qualities, all of which are truly hereditary. It is thus seen that varieties of structure are not always transmitted from first parents, and that when they have once arisen, they become, under favorable circumstances, permanent in the stock.

In considering the diversities presented by the human family, we will notice first the varieties of color. The Negro and the European are the two extremes, which, as in every other particular in which the various tribes of the human family differ, run into each other by the nicest and most delicate gradations. Hence we are warranted in the opinion that difference of complexion constitutes no distinction of species, inasmuch as the skin is almost black in some nations classed as Caucasian, and even among the American tribes the extreme of a white and a black skin is exhibited. This subject is investigated at length both by Lawrence and Prichard, the former maintaining that climate has no agency in causing the varieties of color observed in the human species, whilst the latter advocates the opposite opinion. That Prichard is correct to a certain extent we will attempt to show in the sequel; but it is equally evident that the difference of color in the primary races comes under the head of accidental or congenital diversities. Having stated many facts which favor the latter opinion, Lawrence adduces analogous ones among the inferior animals. Thus, the circumstance that in many parts of England all the cattle have the same color, he refers to the custom of slaughtering all the calves which have not the desired tint We also know that white sheep may produce black lambs; and so well aware are farmers of the liability of this color's being again transferred that they always reject black rams in breeding. But the influence of local circumstances, on the other hand, is apparent in the fact that, notwithstanding the horses which run wild in Paraguay are descended from variegated European stocks, yet they are now of one peculiar color.

As regards the hair, beard, and color of the iris, we also observe strongly marked varieties in the human family. Whilst the head of the Caucasian race is adorned with an ample growth of fine locks, and his face with a copious beard, the Negro's head presents short woolly knots, and that of the American or Mongolian, coarse and straight hair, all having nearly beardless faces; and with this diminution of the beard is combined a general smoothness of the whole body. That the coloring principle in the skin and hair is of a common nature is evident, from the fact that among the white races every gradation from the fair to the dark is accompanied by a corresponding alteration in the tint of the hair. This remark applies equally to the colored varieties of men, for all these have black hair; but among the spotted Africans, according to Blumenbach, the hairs growing out of a white patch on the head are white. These facts, in connection with others observed among inferior animals, as the dog, sheep, and goat, prove sufficiently that a distinction of species cannot be established on the mere difference in the hair. What a striking contrast there is between the hairy coat of the argali or mouflon and the beautiful fleeces of our most valuable sheep, both of which belong to the same species. It is probable that the black and crisp hair of the negro tribes, called from a loose analogy *woolly*, may be an accidental variety. That a similar connection in point of color also exists between the skin and iris was noticed as long ago as the days of Aristotle.

As regards the difference of stature and features, and peculiarity of organization, it has been already remarked that these do not give sufficient ground for establishing a distinction of species.

Hence, seeing the varieties of form and structure which distinguish the inhabitants of the same region, it should not excite our surprise when we consider the diverse influence of external agencies in remote regions, to find a much greater diversity between the natives of each respectively. Indeed we find in all the departments of organized nature a diversity of structure within the limitations of species analogous to those exhibited in the human races. It is conceded on all hands, as remarked by Blumenbach, that swine were unknown in America until carried hither from Europe; yet, notwithstanding the comparatively short period that has intervened, there now exist many breeds, exhibiting the most striking peculiarities as compared with each other or with the original stock. The pigs carried in 1509 from Spain to Cuba degenerated, according to Herrera, into a monstrous race, with toes half a span long. They here became more than twice as large as their European progenitors. Again, we find the breed of domestic swine in France, with a high convex spine and hanging head, just the reverse of that of England, with a straight back and pendulous belly. In Hungary and Sweden we meet a solidungular race. It is also observed by Blumenbach 'that there is less difference in the form of the skull in the most dissimilar of mankind than between the elongated head of the Neapolitan horse and the skull of the Hungarian breed, which is remarkable for its shortness, and the extent of the lower jaw.' It thus appears, as was shown before, and will be still further illustrated, that organic structure is strikingly adapted to the necessity of local circumstances.

The classification of skulls under the five general forms already described, is of course entirely arbitrary. As in every other corporeal diversity, so we find in regard to crania an imperceptible gradation among the nations of the earth, filling up the interval between the two extremes of the most perfect Caucasian model and the most exaggerated Negro specimen. Hence we must conclude that the diversities of skulls among mankind do not afford sufficient ground for a specific difference,—an inference confirmed by the variations which occur in animals of the same species.

Admitting then that the phenomena of variation brought under view in regard to inferior animals, which are observed both in their wild and domestic state, are analogous to the varieties which distinguish the various races of the human family, it follows that the latter should present still greater differences; for whilst each species of animals inferior to man is mostly confined to a limited region and to a mode of existence that is simple and uniform, the human races are scattered over the whole face of the earth, under every variety of physical circumstances, in addition to the influences arising from a moral and intellectual nature.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XVIII.

Pneumonia continued—Its Complications—Pleurisy—Bronchitis—Delirium—Jaundice—Symptoms of Pneumonia in Adults—Physical Signs—Rational Signs—Duration of the Disease.

GENTLEMEN:—

I will speak to-day of the complications and duration of pneumonia. The almost invariable complication of pneumonia is pleurisy. It very seldom happens that pure, simple pneumonia exists; it is almost always accompanied by the development of pleurisy. We do occasionally, it is true, see cases of 'central pneumonia,' as it is called, in which the pleura is unaffected. But as a general rule we have pleurisy, not as it occurs in the idiopathic form, but simple inflammation of the pleura attended by simple exudation of coagulable lymph, so trifling and transparent in many cases that unless you examine the lung very closely, you will not be able to notice it. There is seldom any effusion of serum into the cavity of the chest. This may be called a *dry pleurisy* in contradistinction to the common form, which is, you are aware, attended by an effusion of serum.

Another common complication of pneumonia is bronchitis. Indeed, as I said, this is an unfailing concomitant. These then may be regarded as common or almost universal complications of pneumonia. In general, in cases of pneumonia, the intellect is unimpaired, that is, in adults. In children the disease frequently terminates in coma, just as other acute inflammatory affections of the pulmonary tissues do. A very curious fact in connection with the mode of death in such cases, is that the patients usually die with great fortitude and resignation. The most hardened wretches and most abandoned characters die of pulmonary disease as composedly as the best Christian. It is certain that persons die more calmly of disease of the lungs than any other fatal affections, such as disease of the heart or fatal inflammation of the abdominal organs. Now this is, I think, worthy to be noticed.

In certain cases we notice delirium, and other symptoms of cerebral disturbance; and in such cases we find after death evidences of inflammation of the brain. In fifty cases treated by M. Grisolle there were four of arachnitis. I examined some of them myself, and remarked great effusion of lymph under the arachnoid membrane. This usually occurs in the latter stages of the disease.

The not unfrequent occurrence of jaundice is to be noticed. It not unfrequently happens that all the ordinary symptoms of jaundice set in, and I have myself met with several cases of this *bilious pneumonia*, or rather pneumonia complicated with jaundice. By those unaccustomed to examine the lungs, this form of the disease has been mistaken for bilious remittent fever, so that you can judge of the importance of this fact in the formation of an accurate diagnosis. It was supposed at one time that this affection of the liver only occurred when the lower and posterior portion of the right lung was affected, and that the jaundice supervened by what Bichat called 'contiguous sympathy.' Now this would be very plausible had it not been proved by subsequent observation that these symptoms of jaundice occurred when such an explanation could not possibly be offered, that is, in cases where the superior portion of the lung was affected, the intermediate portion being perfectly healthy. This explanation must be regarded, then, as forced, and not borne out by facts. Still it is to be noticed that this complication is not at all unfrequent. Another complication, and the last one to which I shall refer, is diarrhœa. This is very common in children. But I think it would be unsafe to say that inflammation of the intestinal canal is only to be admitted when diarrhœa is present. I have repeatedly met with cases where this inflammation existed, and yet nothing of diarrhœa. And my own impression is that when you have that thin, brownish discharge, which is commonly called the 'chopped spinach discharge' in children, it is connected, if not with inflammation of the mucous membrane of the intestine, at least with a very high degree of irritation. And every one knows we meet with this where there is no diarrhœa. Now this point is of more importance than you would at first suppose. If inflammation, or high inflammation of the mucous membrane of the intestinal canal is so common a complication with the pneumonia of children, we must be very careful how we address our remedies. We must be very careful indeed not to exhibit such remedies as have a tendency to irritate the mucous membrane. Above all we should be cautious in the administration of tartar emetic. In adults, also, it is not at all uncommon for diarrhœa to supervene, and in such cases the tartar emetic treatment is, I need not say, to be at once suspended. This state of things may, we know, have existed for a lengthened period before the occurrence of the pneumonia. In cases of children, whose parents neglect them from necessity or choice, we have very frequently cases of pneumonia occurring, and of course when such a complication exists, our treatment must be modified accordingly.

I will now, gentlemen, proceed to speak of the *symptoms* of pneumonia. In the first place, I beg to remind you of the remarks I have already offered relative to the influence of age on the duration and mortality of this disease. The same influence modifies the symptoms. We will take, in the first instance, the simple pneumonia of adults as it occurs between the ages of six and forty-five years. The patient is affected in the onset of the disease with more or less sensation of lassitude and fatigue, loss of appetite, and in short that general feeling of indisposition which usually marks the invasion of all acute inflammatory affections. This state of things is often followed by a chill, though not uniformly, for the occurrence of that seems to depend partly on the situation of the patient at the time of the attack. If exposed in the open air at that period, we have a chill almost invariably; but if it happens that the patient is attacked at night when covered up in bed, the chill may not be experienced at all. This irregularity in the occurrence of this symptom must be referred, in part, at all events, to the degree of exposure at the time of the attack of the disease. The chill, when it occurs, is soon followed by more or less febrile reaction, and if you visit the patient during the first twenty-four hours after the attack, in what condition do you find him? In bed, with his face flushed, more or less pain in the back and limbs, tongue white and furred, appetite impaired, thirst considerable, pulse soft and from 90 to 100, temperature of skin considerably elevated. Together with these general symptoms which are common to all inflammatory diseases, you have local symptoms equally distinct. The patient complains of pain in one side, and, what is remarkable, it is confined to a particular spot in almost every instance. It is a fixed pain seated below the mamma on the affected side. It is confined, as I have just remarked, to that spot, and its seat might be covered by a dollar piece. The pain is extremely acute. In connection with this you notice a cough which is usually dry and fatiguing, increasing very much the pain, which is also, by the way, very much aggravated by taking a full inspiration, and also in a slight degree by change of position in bed. There is also more or less oppression of the respiration generally at this period, however it is not so much so as at a later stage.

If we now examine the physical signs and attempt to ascertain the disease with which the patient is affected, and examine the patient as he lies in bed—if we percuss the anterior part of the chest and apply the ear there, we will not discover any thing abnormal. Percussion is perfectly good—the respiration is quite pure, and only somewhat more distinct than natural, because the dyspnœa is sufficient to develop it more than usual. But there is nothing abnormal to be discovered about the anterior portions of the chest. But if you set your patient up in bed, you will discover on examination of the posterior parts of the chest, abundant evidence of commencing disease. You will have in the first place, slight dulness on percussion over the region of the pain, though you must remember that the dulness will be at this stage comparatively slight, and requires a good deal of experience and careful comparison of the sound elicited on the opposite side in order for its detection. Together with this, we notice more or less change in the character of the respiratory murmur. It is decidedly more full than in health, and at the same time you will, if you listen to the voice, discover that there is more resonance than natural, and some tendency to bronchophony. We have also frequently in connection with these signs what is termed the 'crepitant rattle.' This is, where it occurs, pathognomonic of the first stage of pneumonia—the stage of congestion. Now watch a patient from day to day, and you will observe a gradual increase in the symptoms. The febrile symptoms do not at all abate, but continue in a more or less marked degree—the oppression of the respiration and loss of appetite continue—the pulse is still more or less accelerated—and the local symptoms still exist—the pain in the side does not materially abate—the cough continues equally urgent—the expectoration, which at the commencement of the disease was almost entirely wanting, and was nothing more than common transparent mucus from simple irritation of the bronchi, now undergoes a change. Suppose we now carry on the patient to the fourth day of the disease, when the stage of hepatization is usually fairly developed in the lung. And what do we now find? Along with this general increase of the symptoms to which I have just adverted, we find a corresponding change in the physical signs. The flatness on percussion over the posterior part of the lung is much more marked—there is now no difficulty at all in recognizing it. The respiratory murmur, also, instead of being feeble as in the former stage, has distinctly assumed the character of the blowing or bronchial respiration—the air vesicles no longer admit air—the sound of the passage of the air in the bronchial tubes is transmitted to the ear through the surrounding condensed tissue, and we have, as I have just stated, the blowing respiration. Then the crepitant rale, it is found, has entirely gone, for you can at once perceive that when the air vesicles are obliterated by lymph, there cannot be any bursting of air bubbles, consequently we have now a perfectly dry respiration; and in connection with this we have also more or less increased resonance of voice, and the bronchophony, which was at first rather suspicious, is now clearly and strongly marked. And round the outskirts of this hepatized portion of lung, there are portions of pulmonary tissue in the first stages of inflammation, and have consequently in their region the same signs which were presented when the now hepatized portion was under the first stage of the disease. This indicates of course the gradual spread of the disease.

Together with these changes in the physical signs, we notice certain changes in the rational signs. In the first place we notice that the respiration which in the former stage was simply accelerated and oppressed, has now assumed a peculiar character, which is perfectly diagnostic of pneumonia, and therefore demands your most careful attention. We have the respiration high, and the expectoration *rusty*, which is characteristic of the disease. The disease still goes on—febrile reaction is strongly marked—the pulse remains accelerated—the appetite is still gone—the thirst is great—the pain in the side remains—and thus the patient goes on until the tenth day of the disease. At this period,—which I have selected as usually presenting the disease in its greatest degree of intensity,—we will find the patient exhibiting the symptoms already described—considerable febrile reaction—the countenance perhaps slightly livid—the tongue still has its white coat, or rather is dry and brown—the pulse still accelerated, seldom less than 120 at this stage of the disease—the respiration still more impeded—and the expectoration more or less abundant, consisting mostly of bronchial expectoration, sometimes, however, mixed up with the characteristic rusty sputa peculiar to the disease. The physical signs at this period are just as already described. Together with the flatness on percussion, we have the bronchial respiration marked at the roots of the lungs, as the bronchial tubes are those of the largest size. We have also strongly marked bronchophony, and the respiration every where dry where the lung is affected. Perhaps still in certain portions of the lung, very high up, you can occasionally hear a little crepitant rattle, which shows that the first stage of the disease is going on there. But in most cases at this period, the crepitant rattle is not to be heard in any quarter.

Now suppose the disease has reached its height and the patient is to recover, what progressive change will we notice? It not unfrequently happens when pneumonia is well treated and the strength of the patient is considerable, that the disease at this stage remains stationary for several days. The disease vacillates, as it were, for a time between life and death; but in some days the patient begins to recover, and in the usual way that patients do from all acute inflammatory affections. The pulse becomes less frequent—the heat of skin diminishes—the pain disappears—the respiration becomes more easy—the expectoration becomes less and gradually disappears—and the physical signs undergo an equally marked change. But the secession is in an exactly opposite direction from what we noticed in the progress of the disease. During the period of resolution, resolution begins at the upper portion of the lung and extends downward. The dulness on percussion now begins to be less marked over the part affected—the bronchial respiration becomes less and less distinct—the resonance of voice is less marked—all evidently showing that the obstruction to the passage of the air is gradually disappearing. But as the disease resolves itself, and as the bronchial respiration subsides, we notice that it changes its character, and we discover the development of a rattle which is very analogous to the common crepitant rattle, except that it is much coarser and moister than the other. This is what is termed the 'returning crepitant rattle,' and it is looked for with great anxiety, as it marks distinctly the commencement of resolution. It gradually changes its character, and degenerates, if I may so speak, into a distinct mucous rattle, and is heard during inspiration and expiration, passing the ear just as the mucous rattle does. During this time the expectoration becomes more free and natural, and all the other symptoms, as I remarked, gradually disappear. The respiration returns to its natural condition, and this is the termination of the disease.

Now in cases which terminate fatally after the tenth day, what do we find? We are to expect in these cases that suppuration, if not already commenced, is about commencing; and is there any indication from which we can safely say, in any given case, that suppuration has commenced? No. There is no conclusive evidence by which we can prove in a given case that suppuration has commenced. Recollect that suppuration first assumes the condition of concrete pus, precisely analogous to the concrete fibrine which is present in the second stage of the disease. You have in such a case some dulness on percussion and other physical signs of the second stage of pneumonia. But if this pus shows a disposition to soften, you have a development of the mucous rattle over the part of the chest thus affected, and you have in some rare cases an approach to a gurgling respiration. Now, in other cases, we have a characteristic respiration which sometimes occurs, not however so often as to be a certain criterion—that is, the gradual appearance in the expectoration of what is called the 'juice of prunes' expectoration, a term used by the French, and which gives a perfectly correct idea of the thing. The expectoration is in such cases a red, aërated mass, which resembles the juice of grapes. This, when it occurs, is strongly characteristic of suppuration; but we have reason to expect that from the continuance of the disease. There is no cessation of the febrile symptoms—the cough becomes dry, and there is no longer any expectoration at all, not from a want of secretion, but because the patient is no longer able to expectorate—the lungs become more and more oppressed—the countenance of the patient assumes a livid hue—the pulse is greatly accelerated—the extremities cold—and the patient eventually dies of suffocation. This is the usual termination of the disease, when it ends fatally after the tenth day.

Now what is the duration of this disease? When it occurs in healthy adults, the disease usually lasts about fourteen days. The disease may in some cases be protracted considerably beyond this period; but numerous and accurate statistical tables have established the fact that the usual duration of pneumonia is the period I have stated.

In the next lecture, we will speak of the symptoms of the disease as it affects old persons and children.

REVIEW DEPARTMENT.

Pathology, founded on the Natural System of Anatomy and Physiology; a Philosophical Sketch, in which the Natural Classification of Diseases, and the Distinction between Morbid and Curative Symptoms, afforded by Pain or its absence, are pointed out; as well as the Errors of Homœopathy and other Hypotheses. By Alexander Walker, Author of 'Intermarriage,' 'Woman,' 'Beauty,' &c. &c. New York: J. & H. G. Langley, 57 Chatham street. 1842. 12mo. pp. 186.

This is a very able and interesting work, and in every way creditable to the ingenuity and acumen of the author. We do not think, however, that Mr. Walker's 'natural system of medicine' will supersede the old-fashioned medical philosophy. Still the volume is not without its value. Although containing much conjecture and theory poorly enough supported, yet it presents many new ideas not without their use, and exhibits in a clearer light some stable doctrines not yet fully admitted by all.

The grand position which the author seeks to establish is, that anatomy is the basis of physiology; and that this being admitted, a classification which places the objects of anatomy in a true and natural relation to one another, will apply in like manner to the objects of physiology and pathology. According to Mr. Walker, anatomy is divided into three parts—that which regards the locomotive organs—that which regards the vital or nutritive organs—and that which regards the mental or thinking organs. In order to classify the objects of animal physiology, it is only necessary to substitute the term 'functions' for that of 'organs,' and this department of science resolves itself into the consideration of the locomotive, nutritive, and mental functions. In pathology, again, we have merely to substitute 'diseased functions' for 'healthy functions,' and we have three classes, embracing diseases of the locomotive functions, of the vital and nutritive functions, and of the mental or thinking functions. This system of medicine which looks so exact and intelligible in theory, is, unfortunately for its propounder, overthrown by the simple fact that it implies that 'medical science is irrational and unavailable unless when founded on a perfect knowledge of the structure and functions of the animal body—a knowledge to which we have not yet arrived, and which it is not likely that we ever shall obtain.'

We have not room for a critical examination of many of Mr. Walker's positions and statements, on which we would otherwise have desired to comment; but we present our readers with the following chapter from the volume itself, which contains a recapitulation of our author's views and doctrines, and which is certainly worthy of being read and examined:—

Anatomy is the basis of physiology; and physiology, the basis of pathology. The natural classification in the first of these sciences, is strictly applicable to the other two. That classification expresses the relations existing between the sciences themselves, as well as the relations of their parts to each other. Without a systematic knowledge of these relations, there can be no accurate reasoning in any one of these sciences.

What is true of these sciences generally, is true of their parts, under whatever aspect they are viewed. Thus, in natural pathology, the classes, orders and genera of disease correspond precisely to the classes, orders and genera of organs and functions. And, as such classification necessarily indicates, in each disease, the function primarily deranged, as well as the mode of derangement, it indicates also the treatment.

But to attain the knowledge of individual diseases, which enables us thus to class them and indicate their treatment, the intimate nature of each disease must be understood. The nature of disease consists in a change of the healthy state and action of parts—often of minute organization and proportionally obscure function; and, until this is known in each disease, the treatment of it must be unscientific, and liable to all the errors of empiricism; for 'similar symptoms (hitherto observed with too little discrimination) may be the reflection of different diseases.'

Already the intimate nature of disease is known to us in many cases. Discriminate observation of the symptoms of each disease, with all the aid of improved anatomy, physiology and pathology, will explain it in the rest.

In every disease, there are two kinds of symptoms, morbid and curative;—the former being the signs of the disease; the latter, the signs of natural reaction or of the vis medicatrix naturæ; and these two kinds of symptoms are directly and utterly opposed to each other.

In every disease, consequently, the chief duty of the physician is the distinction of the morbid from the curative symptoms—a task less difficult than its past neglect by all parties would lead us to imagine.

The next duty of the physician is the prescription of simple remedies, of which the effects (as proved by experiments) are respectively contrary to the morbid symptoms, and similar to the curative symptoms. From the neglect of this distinction, a frightful proportion of the sufferings of mankind from disease and its treatment has originated.

Antipathy, from *anti* against and *pathos* disease—or Alexipathy, from *alexein* to drive away and *pathos*,—is evidently the proper name of that great branch of the common practice which attacks disease itself or its morbid symptoms. Homœopathy, from *homoios* similar and *pathos*, is certainly a name as appropriate to that modern practice which every where declares that it imitates the ensemble or totality of the symptoms, and therefore the morbid symptoms—the disease. But as, in reality, the imitation of the morbid symptoms, the disease, is an egregious error, and it is the curative symptoms alone which should be imitated or aided, the term homœopathy is quite inapplicable to the subordinate branch of the common practice which so aids the curative symptoms. It is equally inapplicable even to the practice called homœopathic, in so far as that practice does not excite pathic or morbid symptoms, but only aids the vis medicatrix naturæ. The proper name of that branch therefore is the Symphysic, from *sun* with and *phusis* nature,—or Opheliphysic, from *ophelein* to assist and *phusis* nature.

'Contraria contrariis curentur' is the law for the treatment of morbid symptoms, to which no other law can possibly apply; and, though often abused, it is applied equally in the common practice and in homœopathy. This law is the first to be acted upon; because, as observed even by Hahnemann and the Homœopathic Congress, 'the removal of the remote or real cause, may alone cure the disease.'

This law demands the prescription of doses relatively large—large compared with those which would aid the curative symptoms; for, according to the quantity or power of the cause, must be the quantity or power of the antidote.

'Similia similibus curentur' is the law for the treatment of curative symptoms, occasionally and indistinctly acted upon in common practice, but constituting the sole recognised and too exclusive basis of homœopathy, which acts upon it as perfectly as is permitted by the fatal error of not distinguishing between morbid and curative symptoms.

This law demands the prescription of doses comparatively minute; because the medicaments prescribed under it are such as act in harmony with, and have only to come in aid of, the efforts of nature—the curative symptoms—the power of which, unaided, is often sufficient for the cure.

Pain is an act of the nervous system, the outcry of life when suffering under morbid symptoms, and the portion of the vis medicatrix naturæ exciting to the production of curative symptoms. Pain is therefore the means of distinguishing morbid from curative symptoms.

Gentle reaction, slight injection, or incipient inflammation, is the consequence of pain, the reaction of the vital system, the instrument of the vis medicatrix naturæ, in the cure of disease.

Medicines being perfectly simple, and their power being determined by their effects on persons in health as well as in disease, their administration will follow as far as possible the order of phenomena.

Where the cause and morbid symptoms can be at once removed, the law contraria will be acted upon, as in taking a thorn from the flesh, adding an alkaline antidote to a metallic poison, &c., and the law similia may not be acted upon at all.

Where the morbid and the curative symptoms follow in successive stages, the morbid symptoms will first be attacked by the law contraria, and then the curative will be guided by the law similia, as in the cold and the hot fit of fever.

Where the same medicament at once attacks the morbid, and aids the curative symptoms, both laws will at once be acted upon, as by at once removing the irritating matter and aiding the ejection in diarrhœa.

Thus the law contraria may be acted upon singly; or both laws in succession; or both laws at the same time and by a single medicament.

The doses of medicines ought to be regulated by their intended application to the morbid or the curative symptoms respectively.

The reader has thus seen that both the common and the homœopathic notions as to first principles, anatomical, physiological, and pathological, are vague and inaccurate.

Briefly stated, the characteristics of this work, which is intended to remedy that vagueness and inaccuracy, have been:—the general classification of the organs, functions and diseases of the human body, in strict conformity with their natural relations, in groups of perfectly homogeneous character, and in the order of their dependance;—the view of the nature of disease, as essential to such classification;—the distinction of symptoms resulting from their nature, as of two kinds, morbid and curative;—the application of the aphorism 'contraria' and antipathic medicaments to the treatment exclusively of morbid symptoms;—the application of the aphorism 'similia' and the symphysic or opheliphysic medicaments to the treatment exclusively of curative symptoms;—the consequent and distinct appropriation of large doses to the former and minute doses to the latter;—the showing that pain is the means of distinguishing morbid from curative symptoms;—the indicating incipient inflammation as the instrument of the vis medicatrix naturæ in the cure of disease;—the general indication of the preference or succession of these medicines in relation to the symptoms and the laws by which they must be guided; the pointing out the principle regulating the dose of medicines.

I have especially endeavored to show the truth of both of the two laws, which have hitherto been considered contradictory, and of which it was thought that one at least must be false, as well as to show the precise and definite application of those two laws each of which has hitherto been supposed to be universal and exclusive.

The homœopathist, in the greater law 'contraria contrariis curentur,' has much to receive, even if we knew less than we do of the causes or nature of disease, to which alone that law applies:—indeed, at this moment he unconsciously uses it, and, where he does so, such is its value, that he founds upon it his very first operations in the cure of disease! Without it, in innumerable cases, the rule 'similia' would be acted upon in vain.

The regular practitioner, on the other hand, has to receive, more extensively and accurately, the minor law 'similia similibus curentur'—a law of immense importance, though as yet of imperfect application,—which already, in some cases, he indiscriminatingly employs. The treatment founded on this law has much to recommend it on the score of humanity, since, the moment it comes into application, minute doses are substituted for monstrous and disgusting ones; and, in many instances, for painful and dangerous operations. Assuredly, the more medicine advances in real improvement, the more will the operations of surgery diminish. Without this rule, in innumerable cases, the law 'contraria' would be acted upon in vain.

The union and proper application of both laws, the less as well as the greater, which are thus but portions of one system, will evidently ensure, to a greater extent than hitherto, the cure of diseases. All that is required is, that the practitioner should distinguish the symptoms to which the laws are respectively applicable.

I need not say how different this union, in which one law is applied to the morbid, and the other to the curative, symptoms, is from the unprincipled and injurious practising, at the choice of the patient, of either method, the common or the homœopathic, in their present opposed and exclusive state; for, in that case, antipathic medicaments are injuriously opposed to curative symptoms, and homœopathic methods are idly opposed to morbid symptoms.

Nor is it necessary to recommend to medical men such unity of procedure; its realization is inseparable from the progress of knowledge; and those alone will be the sufferers who neglect speedily to profit by it. He who rejects either principle, as rationally defined and rectified, does so at his peril. He declares that he will practise only one portion of medicine—or rather that he will attempt to cure only one series of symptoms, while he exasperates the other.

Those who think that their caprice may with impunity be indulged in matters of such vast magnitude, ought to be reminded of the remark of Ancillon, that 'nobody has a right to disturb, to paralyze, to impede the intellectual march of mankind. Happily, if any one were disposed to do so, his malignity would at length be powerless. The feeble arm of man cannot long counteract the laws of nature, nor overthrow the order of the universe. Man may effect much, if he confine himself to its eternal track; but, if he endeavor to give it a retrograde motion, he is seized, hurried away, and crushed by the vast wheel of time.'

It is more generally death that cures these ills. Such, indeed, beneficently for the species, is its use: men expire with all their prejudices and incapacities to advance; and the successors to their knowledge add also new power of improvement.

Our readers can now perceive that, as we have already stated, the opinions of Mr. WALKER are calculated to suggest useful trains of reflection;—and it is not every book that leads a man TO THINK!

The Transactions of the Provincial Medical and Surgical Association. Instituted 1832. Volume X. London and Worcester, 1842.

The present volume of the Transactions of this important Association, contains a large amount of valuable and profitable matter. We cannot do more than give a mere table of its contents.

The Retrospective Address, delivered by Dr. Robert Streeten, of Worcester, contains an ample and detailed view of the progress of the different departments of medical science during the previous year. Dr. Streeten arranges his materials under the heads of Anatomy and Physiology, Embryology, the Pathology of the Blood, Pathology and Practice of Medicine, Therapeutics, Medical Jurisprudence, Medical Statistics, and Bibliography and Necrological notices. This address forms the first part of the Transactions.

The second part is devoted to medical topography, and contains three memoirs, one on the Medical Topography of Exeter, by Dr. Shapter, physician in that city; a second on the Climate of Herefordshire, as compared with that of London, by Lieutenant Colonel Philip Yorke; and a third on the Medical Topography of Shrewsbury and its neighborhood, by Dr. T. Ogier Ward of that city; the first and third being continuations of former memoirs. It appears that genuine continued fever, (the Synochus and Typhus of nosologists) is not a very common disorder in Exeter; for the average prevalence of this disorder, in relation to the population, is considerably lower than in many other large towns, as London, Edinburgh, Glasgow, Dublin, and Worcester. Its prevalence also varies, as in other places, in different years and different months of the year. According to tabular statements given by Dr. Shapter, in the course of ten years, from 1824 to 1834, it was most prevalent in 1807 and 1831, and least prevalent in 1833 and 1834; and the months more remarkable for its frequency were February, April, March, and January; and those least remarkable were December, August, September, October, and November, in the order specified. It appears that fever with the well-marked disorder of the intestinal follicles is very rare in Exeter; but the most frequent complication is stated to be affection of the mucous membranes of the stomach and bowels, then the viscera of the chest, and more rarely the brain. Fever with pneumonic disorder is observed chiefly during the winter and spring. In 1839 and 1840, fever occurred with a hæmorrhagic tendency; and many died in consequence of bloody discharges issuing from the intestines, and which no means appeared capable of restraining. Intermittent and remittent fevers are said to be of rare occurrence. Cholera appeared in Exeter in July 1832, when it was prevailing in London and Plymouth. No facts took place to show that it was contagious. It lasted above six weeks altogether, during the three first of which it was very fatal; and then gradually subsided. No epidemic cases were observed after the 1st of September. During its continuance about four hundred persons were destroyed by it. It is remarkable, however, that in the ensuing year it again appeared in September and October, but by no means to the same extent or with the same severity. This is by no means the usual character of a contagious disorder. It seems to have depended upon atmospheric peculiarities and agency. Lead colic or Devonshire colic is now extinct in this city and its neighborhood, unless in painters or those accidentally exposed to the vapors of lead. The abandonment of the use of leaden cisterns or vessels in the manufacture of cider has been followed by the disappearance of the disease, which can no longer with propriety be called the Devonshire colic.

The third part of the volume consists of essays and cases. The first case given is that of a pin passing from the appendix vermiformis into the bladder, by Dr. W. D. Kingdon. The second is a description of a tumor which had been formed in the middle of the *cauda equina*. The third article under this head consists of Further Observations on the Variolae Vaccinae, by Mr. Robert Ceely, of Aylesbury.

We will take an early opportunity of presenting a synopsis of this interesting paper.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, August 13, 1842.

We publish in our present number, a letter from the Coroner of the city and county of New York, relative to the payment of fees to medical witnesses at inquests. In the main, we concur with Dr. Archer, but we cannot allow the matter to pass without a few remarks. In our opinion,—and we think our readers will coincide with us,—in the great majority of cases, the great and important ends of the institution of the Coroner's Court, are lost sight of, in consequence of a deficiency in the means taken to ascertain the cause of death.

In all cases when the circumstances are such as to authorize or call upon the Coroner to institute an inquiry into the cause of death, and an inquest is in consequence held, the jury are required to determine not only whether the death has been natural or accidental, or the result of culpable negligence, or wilful contrivance, but also, as far as they have it in their power, the special form of disease which has produced death. It is unnecessary to say that the verdicts commonly returned by juries—died by the visitation of God,—natural death,—accidental death,—felo-de-se,—convey no information of the kind required by the Registration Act, and under the provisions of that act, ought not in any case to be received by the Coroner. How, then, in a multitude of instances is the necessary information to be obtained, or by what means can a more precise and correct verdict be returned? Only by an actual and complete inspection of the body by a medical practitioner; and it is the Coroner's duty to take care that this inspection shall be effectively performed.

This view of the extent of the duty of juries on inquests is fully sustained by Mr. Farr, in the Third Report of the English Registrar-General. 'The coroner's inquest,' he says, 'was founded at a time when homicide constituted a common cause of death. It must, from its popular nature, have contributed not only to the detection and repression of crime, but to the general abhorrence of assassination, and the tender regard for human life in all its forms, which pervades the minds of the people of this country. The principle of the deodand, too, is full of wisdom, as it recognizes the fact that accidental death may be indirectly caused, and by inflicting fines on the owners of dangerous animals, machinery, and other property, exercises a salutary check upon responsible parties. The Act, which directed inquests to be held upon all criminals who died in the prisons, was an useful extension of the institution, but of less practical importance than the clause in the Registration Act, which provides that 'in every case in which an inquest shall be held on any dead body, the jury shall inquire of the particulars herein required to be registered concerning the death, and the Coroner shall inform the Registrar of the finding of the jury, and the Registrar shall make the entry accordingly.' One of the particulars 'required to be registered' is 'the cause of death.' The Act left to the proper parties, the Coroners, the discretion of holding the inquest, but rendered it imperative on the jury, whenever it was summoned to sit on a body, to inquire into the particulars of the 'cause of death.' The legislature thus provided for the full investigation of all the cases of death, which, in the judgment of the Coroners, required inquests to be held, or were liable in any way to be confounded with deaths by poisoning or violence.'

Dr. Beck, and all the best writers on medical jurisprudence, are also very positive on this point, and insist with great propriety on the necessity of post-mortem examinations. Is it not, then, altogether unjustifiable that no provision has been made in this county, for the adequate remuneration of the medical witness, employed to make an autopsic examination of the subject of the inquest? The necessary consequence of this deficiency in the statute, is that in most cases, this great object of the inquest is neglected, and it is hardly necessary to add, that inquests in which the 'causes of death' are not inquired into, can neither inspire criminals with dread nor the public with confidence. The most important part of the evidence on the inquest is omitted when the cause of death is not investigated. Were proper provision made for the attainment of this end, the expense of inquests would, it is true, be slightly augmented, but the use of the inquiry would be infinitely augmented, not only by the value of the information considered in itself, but by the security which would be afforded to the public mind, from the knowledge that murder could not be committed with any chance of secresy. But the expense attending the Coroner's Court is not now considerable, and the trifling additional amount requisite for the compensation of medical witnesses, cannot surely be presented as an objection to the important improvement in the law, for which we are contending.

We do trust that our brethren will take some united action on this matter, and discover that it is really possible for them to make a little exertion for the general good. But as self-interest prompts in this instance to the right and philanthropic course, we suppose there is no fear that it will not be adopted energetically and without delay!

THE MEDICO-CHIRURGICAL REPORTER.

Recovery from Abscesses in the Lungs.

BY DR. GRAVES.

[In a recent number of the 'Dublin Journal,' Dr. Graves has published some valuable cases illustrative of the fact that patients may recover after the formation of large abscesses in the lungs. The following cases (which occurred in the practice of Dr. Stokes) are cited amongst several others:—]

Mr. H., a gentleman aged about 22, was attacked with pain in the side, cough, and fever, and, in a short time, with very copious purulent expectoration. Soon after this the signs of extensive abscess made their appearance in the anterior-superior and lateral posterior of the lung. The patient was then considered to labor under tubercular caverns to a great extent.

Shortly after I saw him, when he presented the following symptoms: the whole anterior-superior, lateral, and posterior upper part of the left lung, sounded extremely dull; perfectly distinct cavernous breathing, with large gurggling and pectoriloquy, were heard from second rib downwards to the mamma, and the same phenomena were audible along the fold of the pectoral muscle, from the axilla to seventh rib. The expectoration was copious, muco-puriform, but not fœtid, and the pulse full, regular, and under 90.

The treatment adopted was palliative; the pulse soon became natural; all hectic fever ceased; the dulness of sound on percussion gradually diminished, and the patient in the course of some months was perfectly restored to health, all the signs of caverns having completely disappeared.

A child, aged 12 years, was attacked with measles, in the course of which severe pulmonary symptoms set in; the measles having subsided, the pulse continued quick, skin hot, and breathing hurried; in about ten days the patient commenced to expectorate a purulent matter of an offensive character. The fœtor of expectoration continued to increase.

I saw the child the third week after the disappearance of measles. The expectoration was copious, of an ash-gray color, and of a horrible fœtor; in fact, the entire apartment was tainted by the smell; the left lung presented nothing abnormal, nor did the upper lobe of right; but the whole region of the lower lobe gave a perfectly dull sound on percussion; loud gurgling cavernous respiration, almost metallic, with a painfully distinct pectoriloquism.

The patient was ordered a milk diet, tonic medicines, and country air, and recovered perfectly well in the course of a few weeks.

Mr. D., aged about 25, high shouldered, and with a remarkable stoop, was attacked with cough in the autumn of 1839. His pulse became quick; he lost flesh rapidly, and presented the usual constitutional symptoms of phthisis in an early stage. Within a few weeks of the invasion of the disease, Mr. D. began to expectorate from half an ounce to an ounce daily, of a sanious purulent matter, having the color of urine, but not offensive. He soon after came to town; the right clavicle was dull on percussion, the vesicular murmur feeble as far as the third rib; above the clavicle most distinct gargouillement existed, and the same could be heard in the acromial region, particularly when he coughed.

Soon after this the pulse became quiet, and the expectoration, though still preserving the above character, diminished in quantity. The patient went to the Cove of Cork, where he remained for the greater part of the winter season. He returned in spring, having become very fat, and without the slightest symptom or physical sign of any pulmonary disease.

I could add (says Dr. Graves) several similar instances of pneumonic abscesses to those already mentioned, but they seem amply sufficient to prove that the disease is of much more frequent occurrence than is supposed, and is more frequently curable than the serious nature of the lesion would lead us to anticipate.

These cases, too, show that vast abscesses may be formed in the lungs, and yet the patient recover; and likewise that real circumscribed abscess occurs more frequently in the pulmonary tissue than Laennec allowed, or his followers seem to believe. It is true, indeed, that where suppuration takes place in the lung, nature effects it in a manner calculated to afford the readiest exit for the matter so formed, or best suited to promote its absorption.

This object, from the extent of the parenchymatous structure of these organs, and its relation to the air cells and minute bronchial tubes, is most easily effected, by so disposing of the purulent fluid, resulting from inflammation, that it can, on the one hand, be with facility eliminated through the bronchial tubes, or on the other absorbed in the texture of the lung itself. In other organs and other parts a similar facility for mechanical elimination does not exist, and consequently the easiest step which nature can take is, to collect the puriform fluid, within the parieties of a circumscribed abscess, which may work its way outwards for the purpose of discharge. From this view it appears that, in other parts, circumscribed abscess is the ordinary means of evacuation provided by nature, and diffuse suppuration the exception; while in the lungs the reverse obtains, diffuse suppuration being the only rule, and circumscribed abscess the exception. The rationale here exposed has been well explained by Dr. Stokes, in his admirable treatise on diseases of the lungs, but at the time he wrote, neither he nor I were aware that large abscesses occur so frequently in the lungs, or are so often recovered from, as subsequent observation has shown to occur.

Some may think that the duration and previous history of the disease may serve to distinguish simple from tubercular disease of the lungs, but more accurate examination of facts will show that no reliance is to be placed upon either as a means of diagnosis, for, on the one hand, tubercular abscess sometimes forms in the course of a few weeks from the apparent commencement of phthisis; and on the other, simple pulmonary abscess is often preceded by inflammation of many months' duration, and the origin and progress of the symptoms are quite identical with those of phthisis.

It was my intention to have added some observations upon several remarkable cases of phthisis which have occurred in my own practice, and the practice of Dr. Stokes, and in which the patients recovered either temporarily or permanently in a manner quite unforeseen and unexpected. In some recovery took place after the occurrence of abundant tubercular deposition and crepitus, and in others after the formation of tubercular cavities.

When the disease was produced by the operation of accidental causes in constitutions apparently sound, the recovery was not so surprising; but we have witnessed recovery of many in a phthisical constitution, and several members of whose families had previously fallen victims to consumption.

Facts such as these ought to prevent the practitioner from placing too great reliance upon stethoscopic examinations, as a positive means of prognosis; for it may be looked upon as established, that phthisis, like most other diseases, *does not always necessarily progress to a fatal termination.*

Treatment of Varicose Ulcers.

BY GEO. HAYWARD, M. D.,

One of the Surgeons of the Massachusetts General Hospital.

These ulcers, when situated on the leg, the usual seat of them, readily heal, if the limb be put in a proper position, and attention be given to the diet and the state of the bowels. But they are very apt to return when the patient resumes his ordinary pursuits and mode of life, unless something is done to remove the varicose state of the vein on which they are dependent. This can be effected radically only by obliterating its canal, and various means have been devised for this purpose. More than two thousand years ago the actual cautery was employed, and occasionally with success. But so severe and hazardous a remedy was not likely to get into general use, and it has long since been laid aside.

Sir Everard Home advised the operation of tying the vein, and stated that he had frequently done it with perfect safety and success. But other practitioners were not equally fortunate; severe and alarming inflammation came on in many cases, and death was the consequence of it in several. The ligature of the vein, therefore, soon fell into disuse, and other means were resorted to, to effect the same object. Among these were the division of the vein, either with or without a division of the ligaments above it; more recently passing a needle under the vein, and applying the twisted suture and the application of the lapis infernalis, as recommended by Mr. Mayo. These two latter methods seem to have the preference at the present day, though upon what ground I am at a loss to conjecture, for their advocates admit that they require great caution in their use, and that alarming and fatal consequences sometimes follow.

The principal danger to be apprehended from all these operations, is inflammation of the vein, and it does not seem reasonable to suppose that a simple division of the vessel would be as likely to produce it, as tying it by means of a needle and a twisted suture, or the application of caustic. In all surgical operations of importance, veins are freely divided, and frequently, as in amputation of the thigh, those of a very large size; and how rare it is that any trouble arises from this cause. Nor have I ever known any ill effects to follow, when it has been done for the cure of varicose veins; and yet this is an operation which I have frequently seen performed and have frequently performed myself. The trouble, which has been said to arise from this cause, was probably owing to the fact that the operation was done at an improper time, when the vein was in an inflamed and morbid state. As a general rule, it is best to defer it till the ulcer has entirely healed, and all the symptoms of inflammation have passed off.

The method proposed by Sir Benjamin Brodie, of dividing the vessel without dividing the integuments above it, would, perhaps, be the best, if we could be certain that the whole circumference of the vein were in this way divided. But in those cases in which this operation becomes necessary, there has been so much previous inflammation of the vessel, that it often becomes closely connected with the surrounding parts, so that when we attempt to pass the knife under it, we may merely transfix it and make a partial instead of a complete division of the vessel. This would necessarily prevent the success of the operation, and could not be known unless the integuments above were divided. I cannot believe that their division enhances the danger in any considerable degree, especially as I have never seen any bad effects follow it.

In either method a compress should be placed upon the part where the division is made, a roller applied from the foot to the middle of the thigh, and the limb kept in a state of entire rest, in a horizontal position, till the wound has healed.

Within the last two or three years, the operations for varicose veins, by the needle and twisted suture and by caustic, have been several times performed at the hospital. The symptoms that followed were much less severe than I had anticipated; some of the patients hardly suffered at all, and in one case only was there any very serious inflammation. The vein was not, however, in every instance obliterated; how these operations would compare in this respect with that of division, I am unable to say, for I have not seen a sufficient number of cases to enable me to make a comparison that would be of any value. I should infer, *à priori*, that dividing the vein would more probably cause its obliteration than any of the other means; and with my present knowledge, I should regard it as more safe.—*N. E. Quarterly Journal.*

Cataract suddenly formed in both Eyes.

Dr. Martin, of Portlaw, communicated to the Surgical Society of Ireland, (April 16, 1842,) the following example of this very rare occurrence:—

'Mary Grant, aged 35, of a miserable cachectic habit, after sitting up for several nights with her invalid mother, suffering much bodily and mental distress, and crying a great deal, fell asleep in the sitting posture, by the fireside, at about twelve o'clock, on the night of Friday, Oct. 15, 1841. About four or five o'clock she awoke, and (although her vision was before perfect) she then found herself unable to distinguish any object around her, and when the clearer light of day came, she was but able to trace the outline of the window sash. Having applied to me for advice, three days after, I was surprised on examination to find the lens of both eyes semi-opaque, and presenting the appearance of being starred from the centre, as if breaking up during maceration. She complained of severe pains in the forehead, jaws, and shoulders—pulse 80, full and hard—tongue loaded with white fur—bowels confined. By means of blue pill, bitters, and blisters to the temples, the pains were removed, and her general health improved, but the lenses gradually became more opaque, and she is now unable to trace outlines of objects passed before her eyes, although the retina is perfectly sensible to the impression of light. That she had perfect vision up to the night on which she states she became blind, I feel perfectly satisfied, as on that evening having been in attendance, I saw her moving about, and nurse-tending her mother, and I had seen her frequently during the previous month.'

Dr. Martin also stated that he remembered, when a pupil, to have seen a somewhat analogous case. The man was a patient in Sir P. Dunn's Hospital, and the following was the history which he gave:—he said that he had been married to a farmer's daughter, and after the usual fun of an Irish wedding, he retired to bed, his sight being perfectly good. Very early in the morning he was called by the necessities of nature to the outside of the house, when he became conscious of the loss of sight. Fearing the ridicule of his friends, he made his way into the house to where his clothes lay, which he found with some difficulty, and left his bride to wonder at his loss for the next two months. He came up to Dublin, and was admitted into Sir P. Dunn's Hospital, where he was successfully operated on by Dr. Jacob. I need not add that his story was laughed at and disbelieved at the time; but I have little doubt now, that it was analogous to that of Mary Grant. In his case also, as in that of Mary Grant, the blindness was not complete at once; in the end, however, both lenses became densely opaque.—*Dublin Med. Press.*

Treatment of Acute Tropical Dysentery.

BY ROBERT LEWINS, M. D.

[Dr. Lewins first enters into the nature of tropical dysentery; and then gives the common treatment by bloodletting, general and local,—calomel and opium—small opiates—and starch injections. He then directs the reader's attention particularly to Dr. Heyn's treatment, in Java, which he witnessed during a residence there.]

His treatment consisted in administering at the very outset of the disease, a scruple of the chloride of mercury. According to his experience, this powerful pharmaceutical agent, when employed in small doses, acts as an irritant, but when given in large quantities, has so decided and immediate an effect, as to merit the name of a direct sedative. I have seen soldiers brought into hospital in the most severe agony, discharging mucus and blood at very short intervals, and laboring under the most aggravated form of the disease. On administering a scruple dose of calomel, the most marked and gratifying amelioration took place. The tormina, tenesmus, and diarrhœa almost instantaneously ceased, a feeling of comfort takes the place of the most intense suffering, the countenance brightens up, the pulse, heat of tongue, and thirst, when present, are diminished, and in short all the distressing symptoms are much alleviated. This remission is, however, often followed by an exacerbation at the end of six or eight hours. Reaction is established, the pulse beginning to rise, and if no steps are taken to prevent it, the whole train of symptoms return with almost undiminished violence. If the diarrhœa and tenesmus come on, no hesitation need be felt in repeating the scruple dose of calomel, but if the physician be on his guard, he may often prevent this, by active measures whenever the tormina and borborygmus are apparent. This is the critical moment, and a scruple of calomel divided into four doses, administered every three hours, will often prove sufficient to prevent reaction, and overcome the disease. If the malady be obstinate, five grains of calomel should be given boldly every three or four hours, and under this treatment the medical man will seldom be disappointed. When the bowels have been quiet for thirty-six hours, a scruple of the powder of rhubarb was found to be most serviceable. The stools which followed were fetid, dark colored, fluid, sometimes bloody, but voided with little or no pain. If symptoms of inflammation appeared in any of the abdominal viscera, which rarely happened, leeches were used; but a blister was almost invariably applied to act as a safeguard, and to relieve the remaining irritation in the intestines. The superiority of this treatment over the other is I think unquestionable. The patient is often almost immediately relieved, and is discharged before the acute disease is overcome by other management. Convalescence is very rapid, the debility which strikes the observer as great in the early stage of dysentery being almost entirely fictitious, arising from the patient's instinctive dread of exertion; while on the contrary, if the disease be allowed to proceed unchecked, until even a very slight degree of disorganization has occurred, the process of recovery is most tedious and discouraging. Salivation comes on occasionally under this treatment, but is by no means necessary for the cure of the disease.

Great care is requisite in the treatment of dysentery, that the patient be confined to an equable temperature; and it may be remarked, that seamen on board ship are very severely affected by small doses of mercury, owing to the exposure to which they are necessarily subjected, from the dampness of the atmosphere, occasioned by the evaporation from the surface of the vast expanse of water by which they are surrounded, and possibly in some degree, from the nature of their aliment. Mercurial pains are in these circumstances a common occurrence after the mildest course of mercury for syphilis, or any other affection, and from their unmanageable character, prove a source of incalculable annoyance both to the practitioner and his patient.

I have only to add, that I am totally unable to explain the rationale of the treatment recommended. Whether its good effect is to be ascribed to the power which mercury possesses over the biliary secretion, to its contra-stimulant virtues, or to some specific effect in diminishing irritation in the internal surface of the alimentary canal, I do not pretend to determine. I feel myself, however, fully warranted in stating, that experience, the grand criterion of the comparative value of remedies, has proved this treatment to be most efficacious. I am persuaded that if generally adopted, it would in the majority of instances lead to a satisfactory and speedy termination of this most distressing disease.—*Lond. and Edin. Month. Jour. of Med. Science.*

Contraction of the Fingers Cured by Electricity.

BY M. BRESCHET.

C. Leclerc, servant, 19 years of age, was admitted into the Hôtel Dieu, on the 5th June, 1838, for a burn on the leg. She was ordered to be bled; the externe made two incisions, having failed to obtain blood the first time; the patient immediately complained of numbness of the arm, which rapidly increased, and at the same time the fingers became so firmly contracted, that the dresser had great difficulty in withdrawing the rooler which the patient held in her hand. M. Breschet was sent for at once, but thought lightly of the matter: the contraction of the fingers, however, continued in so great a degree, that it was found necessary to place something in the palm of the hand to prevent the nails from wounding it. Every means were used to overcome this contraction of the flexor muscles, without avail: a splint was tried for fourteen days, but as soon as it was removed, the fingers resumed at once their old position; in a word, various remedies were tried for six months, but every thing failed. At length M. Breschet resolved on trying the galvanic battery. On the 20th of December a needle was passed into the extensor muscles near the elbow, and another on the back of the wrist; twenty-five and thirty pair of plates were employed, but without effect; the contraction seemed even worse. The needles were now withdrawn and placed, one near the origin of the flexors, the other in the palmar surface of the annular ligament of the wrist; the same strength of pile was used, and to the great surprise of all present, the fingers were gradually extended under the influence of the galvanic shocks; the thumb alone remained flexed. Galvanism was regularly employed every day; on the fourth, the woman could use her index and middle finger freely; on the seventh, the ring-finger became free. Unfortunately the woman now left the hospital, and nothing more was heard of her until she came, of her own accord, in the month of July, 1839, to announce that she was quite well. She informed us that for a short time after her departure from the hospital she had the use of her fingers, but the contraction soon returned again. She consulted a medical man, and told him the means from which she received so much benefit before. He tried galvanism also, and after the twelfth application a perfect cure was obtained. She has not suffered any relapse since that time.—*Journal des Con. Med.*

There are two remarkable points in the history of this case; the sudden appearance of contraction after a wound made by the lancet; and the curious fact that galvanism, instead of increasing the muscular action, had a contrary effect.—*Prov. Med. and Surg. Journal.*

Tincture of Aconite in Neuralgia and Chronic Rheumatism.

BY JOSEPH CURTIS, ESQ., CAMBDEN TOWN.

[Dr. Pereira recommends the external application of this powerful drug in cases of the above-named diseases, when fever, inflammation, and other constitutional disorders are absent; in short, whenever there is violent pain without any other particular marks of disease. Mr. Curtis gives some interesting cases in the Lancet, to show the efficacy of this treatment. He rubbed the tincture on the part affected with a small piece of sponge tied on the end of a stick; for if it wet the fingers it produced an unpleasant numb sensation. The rubbing must be continued till the requisite quantity of the tincture is used. Mr. Curtis relates the following cases:—]

Case 1.—*Painful affection of the nerves about the hip.*—Margaret May, ætat 35, Jan. 16, 1840, about six weeks after parturition, was attacked with severe intermitting pains about the gluteal muscles and loins, and shooting round into the groin, and sometimes half way down the thigh. She is unable to sit up or move in bed; she has headache, but no other constitutional affection.

Leeches, aperient medicine, &c. were used, from which she experienced slight relief, but the pain soon returned.

18. The pain has been very severe to-day, but at present is easier, unless she move, which brings on a return; bowels confined; head much worse.

Take two aperient pills, and rub in one drachm of the tincture of aconite.

19. Has passed a good night, and has had no pain since the tincture was applied; had cramp in the calf of the leg for a short time; has headache at present.

She had no return of the pain about the hip after this; the headache was relieved by ordinary means.

Case 2.—Jan. 20, 1840, ———, a glazier, complained of rheumatism in the elbow joint, of three days' standing; the part was slightly swollen, and tender; he experienced great pain upon extending or flexing the joint; no constitutional symptoms.

Rub in one drachm of tincture of aconite. The pain was much relieved at the time; could extend the arm but not flex it, probably from the skin being swelled. He did not attend again.

Case 3.—Jan. 23, Miss P., ætat. about 35, is subject to rheumatism of the scalp, particularly in cold or windy weather; has had severe pains to-day, the weather being very windy; has no constitutional symptoms.

Rub in two drachms of the tincture of aconite.

24. Has had no pain since the application.

I saw this lady occasionally for some weeks afterwards, during which she had no return of the pain. Although living near me, she has not since applied to me; therefore I consider the cure perfect.

Case 4.—Jan. 25, 1840, Mr. Y., ætat. about 70, has severe pain along the lower jaw, on the right side, and shooting up to the forehead, in the course of the fifth pair of nerves; likewise over the posterior part of the right parietal bone.

Apply two drachms of the tincture.

Felt the usual sensations of cold, heat, and numbness during the application; and lost the pain in about a quarter of an hour. I saw him about six weeks afterwards, when he had had no return of the pain.

This gentleman was very much out of health at the time, his digestive organs being disordered, accompanied by fever, &c., which symptoms remained after the pain in the face was removed.

Case 5.—Mary Keith, ætat. about 40, has been long subject to rheumatism, by which the use of her hands is impaired. At present complains of severe pain across the forehead, on the left side, in the situation of the course of the supra-orbital nerve The pain comes on several times daily, and is much increased by going near a fire. During the accession of pain she loses the sight in the left eye. Has had pain under the right lower jaw, which is better; otherwise she is in tolerable health.

Apply one drachm of the tincture.

The application produced the usual symptoms, and with them the loss of sight in the left eye. After the numbness left her the sight of the eye returned, but she felt no more of the pain.

This is a remarkable case, showing that there is some very important connection between the supra-orbital nerve and the organ of vision.—*London Lancet.*

Iodine Injections for Serous Cysts.

Serous cysts are frequently found on the neck, in front of the different joints, in the mammæ, &c. Instead of extirpating them, M. Velpeau proposes the following method of treatment:—A trochar having been passed into the cyst, and the fluid drawn off, an injection of one-third of tincture of iodine to two-thirds of water is thrown in; this is allowed to remain in the sac for a few seconds, and then pressed out again, a small quantity being suffered to remain behind. The tumor soon becomes painful, but absorption commences in a few days, the tumor diminishes, and shortly disappears altogether. M. Velpeau has employed this mode of treatment with excellent effect in various cases of encysted tumor. It should be observed, however, that frequently three weeks or a month will pass over before the cysts are completely obliterated.—*Journal de Med. Pratique.*

Treatment of Urinary Fistulæ.

BY M. RICORD, PARIS.

At the meeting of the Académie de Médecine on the 20th of April, M. Ricord presented a patient whom he had cured of a urethral fistula, situated at the inferior part of the penis, by means of an opening made into the membranous portion of the urethra, through which he introduced a catheter into the bladder. This catheter he allowed to remain; and when the urine had ceased to flow through the primary fistula (which was not till after two months had elapsed), M. Ricord revivified its edges, and then united them with sutures. When the union was completed, the urine again took its normal course, and the opening made in the perineum soon after cicatrized.—*London Medical Gazette.*

THE COLLATERAL SCIENCES.

Cases proving the influence of the Cerebro-Spinal Axis in the production of Animal Heat.

BY M. BRUGNOLI.

As pathological facts are, generally speaking, superior to experiments on living animals, in so far as the modifying powers of the nervous system over the various functions of the body are concerned, the following four cases bearing on the influence of the cerebro-spinal axis on the production of animal heat, will be read with interest.

1. A woman, 45 years of age, after having long suffered from severe pain in the head accompanied with vertigo, entered the hospital in the following state. Her look was expressive of pain, and she supported the head with both her hands in its every movement. She complained of severe and fixed pain in the occipital region. The respiration and circulation were natural. Her extremities were cold, the upper more so than the lower, and this coldness continued to increase without being relieved by any remedy. Deglutition became difficult after a while, and she died after a period of two months. A rounded cyst, about an inch in diameter, and full of whitish-green purulent matter, occupied the posterior part of the right lobe of the cerebellum, but made no visible projection on the surface.

2. A woman, 75 years of age, entered the hospital for a trifling affection of the digestive organs, where she was soon seized with new symptoms in the form of stupor, difficulty of speech, and violent pain in the head. All the limbs retained their mobility, but the upper extremities and the upper half of the trunk of the body became as cold as marble. The respiration and circulation did not, however, appear to suffer materially. Every remedy failed to restore the heat, and she died after five days of suffering. The left hemisphere of the cerebellum contained an apoplectic effusion of the size of a large walnut.

3. A soldier came into the hospital on account of a fixed severe pain in the dorsal region accompanied by feverish symptoms. When there, he had an attack of pneumonia, from which he made slow and bad recovery. Towards the end of winter a new sensation began to be complained of; this was a sensation of coldness, which he could not remove either by additional clothing or any remedy. This sensation of coldness progressively increased, but did not seem to affect the respiration or circulation. No symptom of paralysis was observed, and his intellectual faculties seemed to be perfect to the day of his death, which took place eleven months after his entering the hospital. The eighth, ninth, and tenth dorsal vertebræ were carious, and an abscess lay over their anterior surface. The spinal marrow, for an extent of about two inches opposite these vertebræ, was in a state of atrophy.

4. A vigorous and robust porter, 30 years of age, was seized, after lifting a heavy burden, with general uneasiness and a sensation of intense cold, which developed itself over all the surface of the body, especially when the surface was touched, though the heat was actually greater than natural. The movements of the body, and the pronunciation of words, were executed with great slowness. The pulse was strong, severe pain was complained of in the head, and his anxiety was great. He died on the fourth day. Coagulated blood was found extravasated beneath the theca of the spinal marrow from the origin of the first dorsal nerves to the extremity of the spinal marrow. The vessels of the substance of the spinal marrow itself were also strongly injected.

M. Brugnoli thinks the above cases demonstrative of the influence of the cerebro-spinal axis on the development of animal heat. One or two foreign periodicals, which also notice these cases, agree with M. Brugnoli that the cases seem to lead to that conclusion.—*Bulletino delle Scienze Mediche.*

ITEMS AND INTELLIGENCE.

'Literary Peddling and Piracy; or, A new way to gain Reputation as a Book-maker without deserving it.'

[Such is the biting caption of an article in a recent number of the *Louisville Journal.* The following extracts will, 'without note or comment' from us, enable our readers to understand its purport and the circumstances which have elicited it:—]

By the readers of the Western Journal, it is no doubt remembered that, in the June number of that periodical, there appeared a review of Professor Dunglison's 'Practice of Medicine, or Special Pathology and Therapeutics,' which was considered the very *reverse* of flattering or favorable to the work and its compiler. As far as information has reached us, no one regards the review as either unfounded in its matter and statements, unsound in its opinions, incorrect in its analysis, wanting in its illustrations, or inaccurate in its details. But every one, we believe, pronounces it *severe in its manner.* Some readers have declared it unnecessarily severe.

Yet, in the face of all this, has the Professor himself, the learned editor of the American Journal, or both united—or some other person, by permission or commission—extracted from said review the highest compliment to said '*Practice*' it has ever received, and very probably the highest it is destined to receive. And the deed was done in a spirit of *artifice* and *trickery*, which some people *may* laugh at as an *ingenious device*, but which others *must condemn*, if not *reprobate*, as an exceedingly *dishonorable*, not to call it an *unprincipled stratagem.* But, be these points as they may, the thing is done, and is substantially as follows:—

The June review, already referred to, fills twenty pages of the Western Journal; and out of the whole of it has been scraped up, by Dr. Dunglison or somebody else, and brought together, the *matériel* from which has been compounded the following paragraph:—

'It (Dunglison's Practice) makes part of the great scheme of *labor-saving* and *power-giving* means and contrivances of the day. It brings together and presents to its readers, under a succinct and condensed form, a vast amount of medical matter which no physician could collect for himself without a most tedious and toilsome examination of detached works, and which, from a want of leisure and books, the great body of physicians in the United States could never collect. By its copious reference to authorities, it serves, to those who are solicitous of further information on given topics, as an index to libraries to which they may have access. It presents to the physicians of the United States a very valuable and praise worthy example of literary research, ambition, and perseverance.'

Nor is there any thing else resembling this in the June review. Most other parts of that article, as will presently appear, are avowedly and sternly condemnatory of the volumes reviewed. Except in the paragraph just quoted, not a shadow of *commendation*, or even of *approval*, as far as we remember, is awarded to them. All else is *virtual*, at least, if not *real* condemnation.

Notwithstanding all this (and the picture hardly equals the reality), in the July number of the American Journal, under the heading 'Notice to Subscribers,' the foregoing recommendatory paragrah from the review is printed.

And the design of the article is obvious. On those readers of the American Journal who have no other source of information respecting our review of 'Dunglison's Practice,' it is intended to act as a low but impudent deception, by palming on them the belief that the extract before them is in harmony with the tenor and spirit of the whole critique. That this, however, is not the case, but that the expedient, petty in its character, is as beggarly an act of literary knavery as stands on record, or as can well be imagined, the following extracts from our review will abundantly demonstrate. And the number of them might be so multiplied as to include a large portion of the article; for, in its condemnation of the Professor's works, that article is quite unparsimonious.

* * * * * * *

On one point, however, *and but one*, our feelings, more perhaps than our judgment, induced us to dole out as much of commendation as might silence the craving of charity, and as much certainly as conscience could tolerate. And behold the consequence! which should operate on both reviewers and readers as a memorable warning.

Professor Dunglison himself, or some friend or agent in his behalf, with the eagerness of a drowning desperado grasping a straw, seized on the gratuity, and pompously emblazoned it on one of the pages of the American Journal, to proclaim in triumph, throughout the wide sphere of the circulation of that periodical, the momentous fact, that Dunglison's 'Practice of Medicine' is acknowledged to constitute a portion (*good*, *bad*, or *indifferent*—nobody has said which) of the 'labor-saving' and 'power-bestowing' machinery of the day!

Such are the character and amount of the enconium on his COMPILATION, *virtually purloined* or *swindled* from the Western Journal, by Professor Dunglison, or some one in his behalf! And may he gain as much in useful experience, from the rebuke and lesson he has here received, as he will necessarily lose as relates to candor and manliness of reputation, by the miserable stratagem.

* * * * * * *

C. C.

Medical Fees at Coroner's Inquests.

TO THE EDITOR OF THE LANCET.

MR. EDITOR :—

In a late number of your valuable journal I noticed a copy of a resolution of the Kings County Medical Society in relation to compensation to medical men at coroner's inquests, when called upon in their professional capacity, which amounts to 'a strike' among the doctors of that county for higher fees than it appears they have been in the habit of receiving on such occasions.

I intended to have noticed this subject in a brief communication at an earlier date, but the pressure of public and private duties prevented it. The article in your journal is calculated to convey to the reader the impression that a fee of five dollars is allowed by law to the surgeon making an autopsic examination for the coroner. There can be no hesitation in admitting that it is just that the medical witness, if he make such examination, should be entitled to receive a fair compensation for such service, yet there exists no statute or ordinance authorizing compensation to be made to the surgeon, and the Board of Supervisors of this county have (as I am informed by my predecessors) invariably refused to allow charges of this kind, however arduous and offensive the duty.

I have deemed it due to myself to make this explanation, in order that the medical profession may understand it fully, and to apprise them that the coroner of this county does not receive and retain fees which belong to them, as is a very prevalent opinion both with doctors and laymen. The belief that these fees are allowed has doubtless become general, from the clear and manifest justice of the claim.

As to the course of the Kings County Medical Society, I am far from agreeing with them in the course they have taken in relation to this matter, and for two reasons—first, because I believe the demand to be unreasonable, and not likely, by any means, to be allowed by any Board of Supervisors; further, it seems to be an anomaly in jurisprudence that the witness should be entitled to five dollars, the sum the law awards the officer upon whom falls all the labor of preparing and conducting the investigation, together with all the responsibility. 2d. Because it is calculated to embarrass the coroner in conducting his inquests, who cannot be expected to become responsible for five times the amount of his own fees, and that too with a moral certainty that the county will not indemnify him; but, leaving the officer out of the question, the ends of public justice might be thwarted. If the *patriotic* course of the M. D.s of Kings County is to be considered worthy of imitation, were it not in the power of the coroner to subpœna and compel the attendance of some medical man as a witness in each case? The language of the statute is emphatic and clear upon this point, and the coroner is fully empowered to obtain medical testimony whenever required. Let us apply the rule of the Kings County Medical Society to the county of New York, where not less than six hundred inquests occur in the course of a year, and suppose the sum of twenty-five dollars to be allowed to the medical witness in each case, this would amount to the snug sum of fifteen thousand dollars, which, together with the fees and expenses of the coroner, say four thousand five hundred dollars, would make a sum entirely too large to meet the sanction of our tax payers in these days of 'retrenchment and reform.'

On the whole, Mr. Editor, it strikes me that the Kings County Society has taken a wrong step in the attempt to exact what I humbly conceive to be an exhorbitant demand on the public, and one which will indubitably defeat the object in view. It would have been wiser on the part of that body to have 'resolved' on an application to the Legislature, who alone can regulate the compensation for such services (the medical society to the contrary notwithstanding); which desideratum can doubtless be effected if the usual means are employed for that purpose. This object it has been and is my intention to gain, by whatever means may be in my power to employ with the next Legislature of this State, and I have too much confidence in the liberality and integrity of that body to believe that a proposition so manifestly just, will be rejected by them.

Permit me, Mr. Editor, in conclusion to publicly express my most grateful acknowledgements to the members of the medical faculty in this city, whose kind and cheerfully rendered assistance on all occasions has materially lightened the arduous duties of a laborious office.

CORN'S B. ARCHER, *Coroner*,
City and County of New York.

Leibig's Organic Chemistry.

The edition of this invaluable work, just issued by the Messrs. Wiley & Putnam, is printed from the *corrected* London copy, and is complete, with *all the additions.*

Circumcision as Practised at Constantinople.

Dr. Bonnafont, one of the physicians of the French army in Algeria, was on several occasions witness to this operation as performed by a native surgeon or tebib. The time at which it is usually practised is about seven or eight years of age. There is generally a festive meeting of the friends of the parents assembled on the occasion; but they all take their leave before the ceremonial rite is commenced. On one occasion, at which Dr. B. was present, upwards of thirty friends breakfasted; they then washed themselves and were sprinkled over with rose water, and after praying they all departed. Seven large candles, fixed in a rod of wood, and ornamented with ribbons or colored paper in a fantastic manner, were then placed at the side of two cushions laid on a low seat; and at the other side there was a vessel holding wood-ashes, and another in which some paper was burning. The father sat down 'a cheval' on the cushions, and held his son before him in nearly the same position as we employ in the operation of lithotomy. The tebib seated in front first forces back the prepuce so as to uncover the gland, which he dusts over with the ashes of the burnt paper. This forcible retraction of the prepuce sometimes gives much pain. The tebib then pulls it forward again, squeezing back the glans as far as possible, and working the prepuce freely between the fingers. Holding it firmly between the nail of his thumb and the forefinger of the left hand, he then snips it across with strong scissors. This is so quickly cut that the child has no time to cry out before it is all over. The wound and the whole of the penis is then dusted well over with the ashes of the burnt wood and paper; nothing else is applied. A fresh application of the ashes is made every morning. There is thus gradually formed an impermeable crust, which comes away like the finger of a glove, when the cicatrisation is complete—this being usually the case about the 25th or 30th day after the operation. During all this time the child is an object of especial regard to his family and his friends, who are every now and then visiting him, and showing him all marks of kindness.—*Annales de la Chirurgie.*

Books, &c. Received.

Animal Chemistry, or Organic Chemistry in its applications to Physiology and Pathology. By Justus Leibig, M. D., Ph. D., F. R. S., M. R. I. A., Professor of Chemistry in the University of Giessen. Edited, from the Author's manuscript, by William Gregory, M. D., F. R. S., M. R. I. A., Professor of Medicine and Chemistry in the University and King's College, Aberdeen. New York: Wiley & Putnam, 161 Broadway. 1842. 12mo. pp. 357. [Notice in our next.]

A Monograph of the Limniades, or Fresh Water Univalve Shells of North America. By S. Stehman Haldeman, Member of the Philadelphia Academy of Natural Sciences. Philadelphia: published for the author by Judah Dobson, 106 Chesnut street; New York: Wiley & Putnam. No. 5. July, 1842. (With Plates.)

An Address to the Graduating Class of the Medical College of Georgia, by Charles J. Jenkins, on the 4th March. 8vo. pp. 8.

Annual Announcement of the Medical College of Georgia.

The Louisville Journal. July 30th, 1842.

Revue Ophthalmologique de la Littérature Médicale des Années 1840 *et* 1841. Non tam nova invenienda sunt, quam nota melius constituenda.—*Morgagni.* Bruxelles: Société Encyclographique des Sciences Médicales, 155 rue de Flandre. 1842. 12mo. pp. 323.

Annales d'Oculistique. Publiées par le docteur Florent Cunier. 2° Volume Supplémentaire. 1er Fascicule. Bruxelles: Chez le Rédacteur en Chef, Editeur, 13 Montagne Ste-Elisabeth. 1842. 12mo. pp. 124.

Annales d'Oculistique. Publiées par le docteur Florent Cunier, Médecin-Oculiste, Chirurgien de l'Institut Ophthalmique de Bruxelles, etc. Cinquième Année. Avril, Mai, Juin, 1842. On Souscrit a Bruxelles: Chez le Rédacteur en Chef, Editeur, 13 Montagne Ste-Elisabeth. 8vo.

Revue des Travaux d'Anatomie et de Physiologie Oculaires. Publiées Pendant les Années 1840 et 1841. Par le docteur J.-B. Fleussu, Chirurgien-Adjoint de Dispensaire Ophthalmique de Bruxelles, etc. etc. Bruxelles: Société Encyclographique des Sciences Médicales, rue de Flandre, No. 155. 1842. 8vo. pp. 28.

Lettres au Professeur M. Serre, de Montpellier, sur l'Emploi des Verres de Lunettes dans le Traitement de Quelques Affections Oculaires. Par le docteur Florent Cunier, Médecin-Oculiste, Chirurgien de l'Institut Ophthalmique de Bruxelles, etc. etc. Bruxelles: Librairie Nationale et Etrangère de C. Muquardt. 1842. 8vo. pp. 8.

To Correspondents.

The remarks of 'Observer' on 'Empiricism' are excellent, and will be made use of in due time.

Dr. Jefferson's letter was received. We will, in the natural course of our arrangements, act on his suggestions; the case will be published in our next.

To Medical Schools or Physicians.

A gentleman, who is thoroughly conversant with every branch of the medical profession, offers himself as a lecturer, or to take charge of the surgical portion only of the practice of a well established physician. Of his ability to fulfil either of these offices he is ready to give the most ample assurances. He has lectured for several years on Anatomy, Experimental Physiology, and on Surgery; and as an operator, he has extracted a few hundred cataracts, and performed the operation of lithotomy fifty times; all other operations proportionally. Inquire at this office, or if by letter, to A. Z., post paid.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Aug. 6., 1842.

21 Men, 40 Women, 72 Boys, 58 Girls. Total, 191.

DISEASES.

Apoplexy	2	Intemperance	1
Asthma	0	Inflammation	1
Asphyxia	0	Of liver	2
Abscess	0	Of bladder	2
Aneurism	0	Of brain	4
Bleeding	1	Of stomach	0
Bleeding from stomach	0	Of chest	0
Bleeding from uterus	0	Of lungs	6
Burned or scalded	0	Of bowels	8
Cachexia	1	Of womb	1
Cholera infantum	37	Of kidneys	0
Cholera morbus	5	Insanity	0
Constipation	0	Jaundice	0
Consumption	23	Killed or murdered	0
Convulsions	14	Lues Venera	0
Croup or hives	1	Mortification	0
Debility	0	Malformation	0
Delirium tremens	1	Marasmus	11
Diabetes	0	Measles	1
Diarrhœa	2	Old age	2
Death from poison	0	Organic disease of heart	1
Dropsy	1	Palsy	2
Dropsy in head	7	Rupture	0
Dropsy in the chest	0	Rheumatism	0
Drowned	2	Spinal disease	0
Dysentery	12	Suicide	0
Erysipelas	0	Sprue	0
Epilepsy	1	Small-pox	0
Fever	4	Scrofula	1
Scarlet	7	Teething	2
Typhoid	4	Tumor	0
Puerperal	1	Unknown	1
Remittent	3	Ulceration of throat	2
Bilious	1	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	5
Fracture	0	Worms	0

John H. Griscom, City Inspector.

City Inspector's Office, Aug. 6, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, AUGUST 20, 1842. No. 8.

DO THE VARIOUS RACES OF MAN CONSTITUTE A SINGLE SPECIES?

BY SAMUEL FORRY, M. D., NEW YORK,

Author of 'The Climate of the United States,' &c. &c.

No. III.

Having surveyed the diversities of corporeal formation among the various races of man, it now remains to consider their moral and intellectual differences; and so remarkable are these contrasts between the races usually distinguished as *white* and *black*, that the distinction of color is not more striking. Whilst the most disgusting moral as well as physical portrait of man is exhibited by the hideous savages of Congo, New Holland, and New Guinea, we discover, on the other hand, that those nations which have produced the richest fruits in art and science, in religion and morals, in civilization and government—in a word, in all that can dignify and ennoble man,—have a beautifully formed head, characterized by great development of its anterior portion. It is these races which have, at all times, not merely vanquished those of a more ignoble formation, characterized by the low retreating forehead, but held them in permanent subjection. The remarkable prominence of the cheek-bones and the projection of the jaws is another characteristic trait of savage tribes, indicating their coarse and animal nature in a great development of the organs of taste and smell.* But notwithstanding their cruelty and selfishness, their unfeeling barbarity to women and children, and their brutal apathy and indolence, unless stimulated by the desire of revenge, or roused by the pressure of actual physical want, which give to the dark races, generally speaking, the lowest degree of moral feelings, we yet find the inferiority of the intellectual faculties, compared with the white races, more general and strongly marked.†

From an extensive series of analogies among the different races of man brought under view by Prichard, he attempts to establish the conclusion, 'that the phenomena of the human mind and the moral and intellectual history of the human races afford no proof of diversity of origin in the families of men. '* * * Nor can it be pretended that any intellectual superiority of one human race over another, which can be imagined to exist, furnishes any argument against this conclusion. If, for example, it were allowed that the Negroes are as deficient in mental capacity as some persons have asserted them to be, this could not prove them to be a different species, since it must be allowed that there are differences equally great, and even greater, between individuals and families of the same nation. * * * There are some negroes whose mental faculties fully attain the standard of European intellect.'

From these facts, as will be seen, Prichard, following the footsteps of Blumenbach, draws the inference that there is nothing in the organization of the brain of the most debased Negro tribes, which affords a presumption of inferior moral or intellectual endowments. On the other hand, Lawrence uses the following language:—'I deem the moral and intellectual character of the Negro inferior, and decidedly so, to that of the European; and, as this inferiority arises from a corresponding difference of organization, I must regard it as his natural destiny.' Now, we will attempt to show, in following up the physical ethnography of various nations, that both these conclusions, though correct in part, abound in error.

The writer would here, however, first announce his own creed. We believe that the brain is an aggregate of many distinct organs, each having a peculiar function—that the varieties of moral feeling and of capacity for knowledge and reflection, as a general law, depend on diversities of cerebral organization, which are indicated by differences in the shape of the skull,—that a cerebral organ is not, perhaps, less susceptible of improvement and development than a muscle,*—that moral and intellectual qualities, not less than physical, are transmittible from the parent to the offspring,—that the mind, notwithstanding it is immortal and immaterial, depends for its manifestations and developments on organic structure, which last determines the intellectual grade of the individual,—and that there is an intimate connection between physical features and moral and intellectual character, both of which are influenced by local causes.

Hence it follows that we regard the mind of every human being, as it emanated from the Creator, identical in its nature. The difference between individuals, in this respect, is the result of the peculiar organization of the brain and of education. Towards the Deity, the original relation of the Negro and the European is the same, but the one has far outstripped the other in the development of the material structure through which mind is manifested. We repudiate the idea of a 'mind diseased;' for as it is immortal and immaterial, it can suffer no change from disease; but to have sound manifestations of mind, we must have healthy organic structure. Upon the doctrine of a plurality of mental organs, we are enabled also to explain the phenomenon of monomania or madness upon a single subject.

In taking a general survey of the physical ethnography of the African races, it will be necessary first to advert to its physical geography. Africa has generally been divided into three great regions, two of which comprise immense mountainous tracts or table-lands, whilst the third is the intervening space consisting of an ocean of sand. The elevated region of Northern Africa is a continuous system of highlands, which, under the denomination of Atlas, extend along the Mediterranean coast. These highlands on the border of the Atlantic ocean seem to be a continuation of the system of mountains in the Spanish Peninsula, separated only by the narrow strait of the Mediterranean; and on each side of this sea, the vegetation in general presents a marked analogy. The mountainous region of Central Africa, lying south of the Great Desert, still remains the 'terra incognita' of the civilized world. This high plateau extends, according to Lacépède, from 10° north to 20° south of the equator, approaching the seacoast in some parts, whilst other portions are environed by vast deserts of sand, which, as a sea of fire, prevent all approach to the centre of the continent. As the rivers, compared with those that descend from the steppes of Central Asia, are small, it is inferred that the mountain elevations contain great lakes, or that snow and rain fall in comparatively small quantities. Of the lowlands of Africa, the fertile plains are mostly confined to the immediate vicinity of the mountain chains, which supply them with rivers. These fertile tracts bound on the north and south the great Sahara, whose vast sandy plains, estimated at half the extent of Europe, are traversed by chains of rocky mountains, interspersed by innumerable oases—islands of verdure that spring into existence wherever water finds its way to the surface.

---

* The physiognomy of the Fejee Chief, recently brought to this country by the squadron of the Exploring Expedition, and who had been captured, on account of the massacre, several years ago, of part of the crew of one of our vessels, upon whom he displayed his cannibal propensities, afforded a fine illustration of this law.

† We would be distinctly understood as using the terms, *white* and *black* races, in the general sense of Caucasian and Ethiopian varieties. The color of the skin implies no distinction of races; for, as is shown throughout this article, the African tribes vary much in this respect,—the American exhibit the extremes of white and black,—and even the Caucasian, generally characterized as white, present nations decidedly black. In the frontispiece to the third volume of Prichard's work, we have a striking specimen of a black Caucasian, being a portrait of Ramohun Roy, 'a Brahmin of undoubtedly pure race.'

* It cannot be doubted that a partial change of figure in the cranium of the adult takes place from time to time, according to the pursuits of the individual. That bones change more easily than the softer parts is proved by physiological experiments and the phenomena of disease. By the absorbents, their elements are continually removed—a loss which is as constantly repaired by the deposition of new particles secreted from the blood.

From Prichard's survey of the ethnography of Central Africa, it appears that the native races of this region, properly called Negroland, differ much in their physical, intellectual, and moral state, according as they have lived under moral and physical conditions of a different character. As human races, as we are taught by history, seldom emerge from the state of instinctive existence until moved by some impulse from without, so we here find tribes of aboriginal people secluded amid their mountains and forests, which serve as almost impenetrable barriers against foreign influence of every kind. But even among these tribes, human society has not been stationary and unprogressive from age to age. There have existed for centuries, (not to speak of the kingdom of which the ancient city of Timbuctoo is the capital,) several Negro empires, originally founded by Mahomedans, in which many of the arts of civilized society have been adopted. They even live in large cities of 30,000 inhabitants—a fact which implies a considerable advancement in civilization. The Mandingos, for example, are a numerous and powerful tribe; their government is well organized; they have public schools, in which the children are taught to read the Koran; and their fields are well cultivated and ornamented with palms, fig-trees, and bananas. Now, there is the strongest evidence to show that the decided superiority of this nation over many other African tribes, who are found in various stages of improvement, did not arise from any original difference, but from the circumstance of the degree of civilization brought about by the religion of Islam. As the various races of man constitute but a single species, is it not then reasonable to ascribe the superiority of the Caucasian variety to a similar impulse? When a people have once received the impulse of social improvement, the portion of the brain devoted to the intellectual powers will be stimulated into more than ordinary action, and as these two causes mutually re-act on each other, we ultimately behold the coincidence of a high degree of civilization and a great development of the intellectual organs, as manifested in the cranial formation of the Caucasian race. As mind is immortal, and the brain is the material instrument of its manifestation, we conceive that this doctrine reconciles the diversities observed in the moral and intellectual qualities of the various races of man, with the well-established conclusion of a *single* species.

These inferences are not hypothetical, but deduced from historical facts relative to the aborigines of Central Africa. 'Tribes having what is termed the Negro character in the most striking degree,' says Prichard, 'are the least civilized. The Papels, Bisagos, and Ibos, who are in the greatest degree remarkable for deformed countenances, projecting jaws, flat foreheads, and for other Negro peculiarities, are the most savage and morally degraded of the nations hitherto described. The converse of this remark is applicable to all the most civilized races. The Fulahs, Mandingos, and some of the Dahomeh and Inta nations, have so far as form is concerned, *nearly European countenances and a corresponding configuration of the head.*' Strange to say, this evidence is afforded by the writings of a philosopher who, with Blumenbach, maintains that there is nothing in the cerebral organization of the debased and savage Negro tribes, which affords a presumption of inferiority of moral or intellectual endowments!

It may be here remarked, that the cradles or nurseries of the first nations of which we have any historical records—the people in which the intellectual faculties were first awakened from the brutal sloth of savage life—appear to have been extensive plains or valleys, irrigated by fertilizing streams, and blessed with a mild climate. As the means of sustenance are in such localities easily obtained, the human mind, if man in this primitive state will reflect at all, is most apt to receive that impulse which leads to the cultivation and development of his nature. It is in such regions that we discover the most ancient centres of population; as, for example, the splendor and luxury of Nineveh and Babylon were exchanged by the Semitic nations for the simple habits of wandering shepherds; and in the fertile valley watered by the Nile, we also find the first foundation of cities and the earliest establishment of political institutions; and here, too, were invented hieroglyphic literature and those arts which embellish human life.

Having taken a general survey of African ethnography, Prichard attempts to arrive at some conclusions in reference to the relation, if any exists, between the climate of Africa and the physical character of its nations, and in regard to the constancy or liability to variation of these physical characters.

That the physical characters of nations have certain relations to climate, is an opinion warranted by facts, the erudite arguments of Lawrence to the contrary notwithstanding. The limits of Negroland, properly so called, seem to be confined to the intertropical regions of Africa. Now, if we proceed southward of Central Africa, we find the hue of the Negro grow less black, as in the Caffres and Hottentots; and, on the other hand, we discover the same law north of the tropic of Cancer. Although some of the tribes in the oases of the Great Desert are said to be black, yet they are generally brown or almost white; and when we reach the second system of highlands, which has a temperate clime, the inhabitants present the flowing hair and complexion of the southern Europeans. This general law, if the comparison is extended to Europe, is confirmed. On comparing the three elevated tracts bounding and containing between them the Mediterranean and the Great Sahara, we find that the intermediate region, (Mount Atlas,) differs much less from the northern, (the Alps and Pyrenees,) than from the southern chain, (the Lunar Mountains.) The same law is evident in each, as respects vegetation and the physical characters of the human races. Whilst the mountains of Central Africa are inhabited by Negroes, the Berbers of Mount Atlas show but little difference of physical characters when compared with the Spaniards and Piedmontese. For the purpose of more extended comparison, Prichard divides Europe and Africa into eight zones, through which he traces a gradation in the physical characters of the human race. Within the tropics, as just observed, the inhabitants, if we confine ourselves to the low and plain countries, are universally black. South of this region are the red people of Caffreland; and, next to these, are the yellowish brown Hottentots. North of Negroland, are the 'gentes subfusci coloris' of Leo,—tribes of a brownish hue, but varying from this shade to a perfect black. The next zone is the region of the Mediterranean, including Spaniards, Moors, Greeks, Italians, &c., among whom we find black hair, dark eyes, and a brownish white complexion, predominant features. In the zone north of the Pyreno-Alpine line, the color of the hair is generally chestnut-brown, to which that of the skin and eyes bears a certain relation. Next come the races characterized by yellow hair, blue eyes, and a florid complexion, such as those of England, Denmark, Finland, the northern parts of Germany, and a great portion of Russia. And north of these are the Swedes and Norwegians, distinguished by white hair and light gray eyes.

We could have wished that Prichard had proceeded still further north, and told us why the Laplanders, Greenlanders, Esquimaux, Samoiedes, &c. have a very dark complexion. This fact has always been a stumbling-block in the way of the advocates of a connection between climate and the human complexion. By them it has been referred to their food, consisting of fish and rancid oil, to the grease and paint with which they besmear the body, aided by the clouds of smoke in which they sit constantly involved in their wretched cabins. The agency of these causes is strongly advocated by Dr. Smith, who also refers to Blumenbach, Fourcroy, and J. F. Meckel, who concur in the opinion that, from the affinity of the bile with the fat or oil of the animal body, nations that subsist chiefly on food consisting of animal oil, not only smell of it, but acquire a very dark complexion. But these northern tribes have the olive complexion, the broad large face and flat nose, and the other features which characterize the Mongolian variety. Hence Lawrence maintains that the distinguishing characters of the German and French, or the Esquimaux or more southern Indians, find no explanation in climatic influences. On the contrary, he ascribes the peculiarities of these northern pigmies to the same cause that makes the Briton and German of this day resemble the portraits of their ancestors, drawn by Cæsar and Tacitus. The French, Spanish, Portuguese, and Italians, belong, he says, to the Celtic race, whose black hair and browner complexion are distinguished from the blue eyes and fair skin of the German tribes, which include the Swedes, Norwegians, Danes, English, modern Germans, &c. It is moreover alleged by Lawrence, that the Germans, who, under the names of Saxons, Angles, Danes, and Normans, successively invaded England, and gradually drove the original Celts into the most distant and inaccessible parts of the island, have not, in the smallest degree, approximated to the latter in their physiognomy. The varieties of the human species he considers to be as distinct as the greyhound and bull-dog, the essential distinctions of which can be blended only in their mutual offspring.

As the Jews have been scattered for ages over the face of the whole earth, and as the race has been kept uncommonly pure by the most sacred prohibition against intermarriage with strangers, it might be supposed that here is presented a case decisive of the question at issue. But, alas! for human knowledge. 'In Britain and Germany,' says Smith, 'they are fair, brown in France and in Turkey, swarthy in Portugal and Spain, olive in Syria and Chaldea, tawny or copper-colored in Arabia and Egypt.' Besides, a tribe of Jews, according to Buffon, was discovered in India, known to be of the stock of Israel, by the Hebrew Pentateuch preserved among them from time immemorial, who had become as black as the natives. But this swarthiness, it is maintained by Lawrence, is the effect of the sun's action upon the individual, whose children will have the original complexion of the race; and that, in the case of the black Jews, an explanation is found in their intermarriage with the Hindoos.

Blumenbach and Smith maintain that the different shades of the dark colors prevail in proportion to climatic heat and the predominance of bile in the constitution, which is a refinement upon the opinion of the ancients; for Pliny ascribes the complexion of the Africans solely to the excessive ardor of the sun in that region, whilst Ovid, in his fable of Phæton, refers it to the same cause. The diversities of the human family, found in Africa for example, are, according to Smith, abundantly explained by reference to the following causes:—'Vicinity to the sun, elevation of the land, the nature of the soil, the temperature of winds, the manners of the people, and the mixture of nations who, at different periods, and in a state more or less civilized, have established themselves within it, either by conquest or the purposes of trade.' Thus, the jetty hue of the skin on the coasts of Congo and Loango, he refers to the tropical winds which traverse three thousand miles of sand heated by a vertical sun, whilst the eastern coast receives the breezes tempered by the vast expanse of the Arabian and Indian seas.

Of all writers, Smith is the most determined advocate of the absolute dependence of all the diversities of mankind upon local causes. He erroneously thinks every other explanation incompatible with the doctrine of the unity of the human race, which rests upon the authority of divine revelation. Hence, too, he argues that the primitive man was placed upon the earth surrounded with the elements of civilization, and that the barbarous state had its origin in man's degeneration. It has ever been the misfortune of metaphysics to have among its cultivators a greater number of divines than of physicians. Hence arose the many absurd speculations on the nature of the mental faculties, regarding them as independent of the corporeal organs through which they are manifested.

That climate exercises an influence in causing the diversities of mankind, is an opinion likewise strengthened by the analogy of inferior animals. As we approach the poles we find every thing progressively assume a whiter livery, as bears, foxes, hares, falcons, crows, and blackbirds; whilst some animals, as the ermine, weasel, squirrel, reindeer, and snow-bunting, change their color to gray or white, even in the same country, as the winter season advances.

We thus discover a marked relation between the physical characters of nations and climate as expressed by latitude—a law that obtains equally in the modifications of climate induced by elevation. Thus the sandy or brown hair of the Swiss contrasts strongly with the black hair and eyes of those that dwell below on the plains of Lombardy. Among the natives of the more elevated parts of the Biscayan country, the black hair and swarthy complexion of the Castilians give place to light blue eyes, flaxen hair, and a fair complexion. In the northern parts of Africa we observe the same law as regards the Berbers of the plains and the Shulah mountaineers. And even in the intertropical region of Africa, several examples are adduced by Prichard.

As regards the influence of locality, it is also observed by Prichard that those tribes which have the Negro character in an exaggerated degree dwell in the marshy lowlands. 'Not only the Mandingos and Fulahs,' he says, 'but all the other races yet described who are aborigines of mountainous regions are more intelligent than the maritime tribes, as well as physically superior to them.' As these effects result mainly from the deterioration of the constitution induced by malaria, this law is mostly confined to the region of the tropics, for it has been already shown that the first centres of civilization were in the extensive plains of temperate latitudes. We may trace a still further connection in the fact that the physical characters of tribes are intimately connected with their moral and social condition. The Negroes in the lowest stage of civilization are the ugliest, having depressed foreheads, flat noses, projecting jaws, and crooked legs. Such are the most ferocious savages—stupid, indolent, and sensual. On the other hand, whenever we find a negro tribe who have been elevated in the scale of social condition, we observe a correspondent improvement in their physical features.

Whether the woolly nature of the hair is connected with local causes is a question not positively admitting of solution in the present state of our ethnographical researches. Although the shape of the head among the South African tribes differs in a degree corresponding to the extent of their civilization, yet it would seem that the crisp and woolly state of the hair, notwithstanding the complexion is considerably lighter than among the tribes of Central Africa, experiences no modification. The Caffres, for example, who have black and woolly hair, with a deep brown skin, have the high forehead and prominent nose of the Europeans, with projecting cheek-bones and thickish lips. This tribe, as well as the Iolols near the Senegal, scarcely differ from Europeans, with the exception of the complexion and woolly hair. Other tribes, as for instance the darkest of the Abyssinians, approximate the Europeans still more in the circumstance that the hair, though often crisp and frizzled, is never woolly. Again, some of the tribes near the Zambesi, according to Prichard, have hair in rather long and flowing ringlets, notwithstanding the complexion is black, and the features have the negro type. The civilized Mandingos, on the other hand, have a cranial organization differing much from that of their degraded neighbors, yet in respect to the hair there is no change. In the United States, it has been alleged by Dr. Smith, with much confidence, that the features of the Africans, after several unmixed generations, lose much of the native African cast. Approximating the white races, the nose becomes higher in the ridge, the mouth smaller, the teeth less prominent, and the hair considerably longer and less crisp. As Central Africa presents a region of burning sand, Dr. Smith thinks that the excessive heat of a vertical sun here tends to curl and involve the hair—an inference that he derives from the analogous effects produced upon other animals by hot and arid climates. But he thinks it probable that this curl may be chiefly caused by the quality of the secretion by which it is nourished, as the strong and offensive smell of the African Negro indicates something peculiar in this respect. 'The evaporation of such a gas,' he says, 'rendering the surface dry, and disposed to contract, while the centre continues distended, tends necessarily to produce an involution of the hair.' Upon the whole, however, the woolly hair of the Negro may be, with good reason, classed among the *accidental* or *congenital* diversities of mankind, which are transmitted from the parent to the offspring. But in no point of view can the facts presented above be reconciled with the hypothesis that the Negro constitutes a distinct species, inasmuch as we do not find in any department of nature that separate species of organization ever pass into each other by insensible degrees.

The complexion, however, cannot, as has been already shown, be legitimately placed in the category of *accidental* diversities. Even admitting that the color of the skin has no relation with the laws of climate, it is plainly obvious that it has an intimate connection with local circumstances. We surely cannot regard as a mere coincidence, the two facts that the intertropical countries all around the globe have black inhabitants, (tropical America, from its great elevation, constituting only an apparent exception,) and that the constitution of these races is better adapted than that of the whites to these climates. As the cells of the camel's stomach show a wonderful adaptation of organic structure to local conditions, without being referrible to climatic agency, so the system of the negro, as his skin is a much more active organ of depuration than that of the white man, is better adapted, let the remote cause be what it may, to the warm, moist, and miasmial climates of the tropics.*

If it be claimed, however, that the characters of nations have their origin in local causes, it will at once be contended that a transmutation of other races ought to occur when exposed to similar external agencies,—that the descendants of the European, for example, after living several generations in Southern Africa, ought to exhibit some of the peculiarities which distinguish the Hottentot. But the fallacy of this inference can, we think, be readily shown. We agree with Prichard that the experiment has never been fairly tried, as the European and Asiatic, who dwelt for generations on the soil of intertropical Africa, never adopted the manners of the aborigines. But even if a nation, by migrating to a different climate, should, in time, be impressed with new characteristics, the primitive features and complexion would be *the ground* for the impressions of the second climate; and if we thus make a third and fourth removal, we perceive, each time, a new cause of variety in the family of nations. Prichard contends that the Arab races in Africa have undergone a change of complexion, and maintains, upon the authority of Mr. Waddington, Dr. Rüppel, and M. Roget, that there are black races in Africa among the genuine descendants of emigrants from Arabia. But we have no authentic instance of the transmutation of other races of mankind into negroes, unless we admit as an established fact the statement of Lord Kaimes that a colony of Portuguese in Congo, in less than three centuries, so degenerated in complexion and figure as to be no longer distinguishable from the neighboring tribes of Hottentots; or the similar facts, mentioned by Dr. Smith, that the descendants of the Spaniards in South America acquired absolutely a copper color, and that a colony of Hungarians, who are among the best-proportioned people of Europe, became, on migrating to Lapland, completely assimilated to the diminutive and deformed natives of that region. That deviations towards the European, however, have taken place, there is no doubt, thus demonstrating that the physical characters of human races are not permanent. There is positive evidence showing that the descendants of genuine Negroes have, in several instances, lost many of the peculiarities of the original stock.

It must be borne in mind, however, that climate is but one among many causes which modify the human frame. Hence it were absurd to contend that the well-developed head of the European should sink back into the low retreating forehead of the savage Negro, as a consequence of climatic influence. What may have been the relative cranial organization of the Briton and the African, at the period when the former, as described by Julius Cæsar, was smeared over with paint and clothed in the skins of wild beasts, whilst the latter was far advanced in civilization in the kingdom of Bambarra, of which Timbuctoo is the capital? Comparing these barbarian Circassians with these civilized Negroes, it is found that the relation which now exists between the well-developed European skull and that of the savage African, was then reversed; for the crania of the ancient Britons found in different parts of England, according to Prichard, are characterized 'by a remarkable narrowness of the forehead compared with the occiput, giving a very small space for the anterior lobes of the brain, and allowing room for a large development of the posterior lobes.' Here then we still observe an inseparable relation between physical characters and social condition, if we may judge from the barbarous state in which the natives of Ireland are represented to have been in the first century of the Christian era. 'They are voracious cannibals,' says Strabo, 'and even think it a laudable thing to eat the dead bodies of their parents.' Strabo, however, does not put much confidence in his witnesses. Diodorus also asserts that the Irish were man-eaters. In the writings of St. Jerome it is stated that he saw, during his residence in Gaul, human flesh eaten by certain Scots. These Scots are supposed to refer to slaves or other persons brought from Ireland.

But it may be asked—What has enabled the rude and painted Britons to become the most renowned people on the face of the earth, whilst the Bambareens, like the Chinese, have been almost stationary for, perhaps, more than two thousand years? It is certainly not the difference in the complexion; for we have evidence in the history of the ancient Egyptians that the Africans are capable of the highest degree of civilization. The cause may doubtless be found in the nature of political and religious institutions and social organization.

---

* A most remarkable instance of the adaptation of organic structure to local conditions, has come to light within a few days. In the Mammoth Cave of Kentucky, there have been discovered fish *without eyes*—a specimen of which is now in our Lyceum of Natural History.

In regard to the Egyptians, Prichard has entered into the most extensive and learned researches, the results of which are thus summed up:—'We may consider the general result of the facts which we can collect concerning the physical characters of the Egyptians to be this: That the national configuration prevailing in the most ancient times was nearly the Negro form, with woolly hair; but that in a later age, this character had become considerably modified and changed, and that a part of the population of Egypt resembled the modern Hindoos. The general complexion was black, or at least a very dusky hue.' That this people had the Circassian form of skull is an inference that might be legitimately deduced merely from the innumerable monuments still existing of their former splendor, after so many ages of desolation; but positive evidence in confirmation is afforded by their mummies.

We have further evidence in the ethnography of Europe of a connection between physical features and moral and intellectual character. The separation of the Magyars from the other Ugrian nations, for instance, took place about ten centuries ago; and their descendants who now inhabit Hungary, differ widely in physical and moral character from their ancestors. 'They exchanged,' says Prichard, 'their abode in the most rigorous climate of the old continent, a wilderness where Ostiaks and Samoiedes pursue the chase during only the mildest season, for one in the south of Europe, amid fertile plains, which abound in rich harvests of corn and wine. They laid aside the habits of rude and savage hunters, far below the condition of the nomadic hordes, for the manners of civilized life. In the course of a thousand years they have become a handsome people, of fine stature, regular European features, and have the complexion prevalent in that tract of Europe where they dwell.' Now these people were originally not superior to the most destitute tribes of Central Africa.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons, New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XIX.

Symptoms of Pneumonia continued—The Pain—Cough—Expectoration—Respiration—Physical Signs—Crepitant Rale—Symptoms of Pneumonia as Developed in Old People—In Children.

GENTLEMEN:—

Some of the symptoms of pneumonia are a great deal more important than others, and therefore demand a greater share of your attention. First is the pain—why should it be seated in the side? The pneumonia is accompanied by pleurisy, which is an almost invariable complication with inflammation of the lungs. In 'central pneumonia' there is not this pain. The pain then is connected with the existence of pleurisy, which is developed with the pneumonia, and may in one sense be regarded as part of the disease. But why should the pain be seated here, whereas we know the inflammation is further back? The reason is that this is the point of the greatest dilatation of the chest, and where, of course, the inflamed membranes are more strained than any where else. Again, although the pain is thus fixed and circumscribed, in a majority of cases we sometimes notice that it is wandering at the commencement of the disease. Sometimes it begins low down in the abdomen, and wanders about till it fixes itself finally at its usual site under the mamma. The importance of this symptom is very important when we consider its value in assisting us to distinguish rheumatic affections of the chest from inflammation of the pulmonary organs. In rheumatism the pain is usually very much diffused, and is seldom accompanied by any symptoms of febrile action. This point, however, we will consider more fully by and by.

Again, in relation to the cough, which is in this disease usually short and dry, and apparently painful—a suppressed cough, if I may so term it. This marks the disease from beginning to end, and is particularly valuable in the diagnosis of the disease in young children, where we want every aid we can get, in order to found a correct diagnosis. If you hear the child cough as you enter the room in which it is, you may from that one symptom alone, form a pretty shrewd guess about the nature of its complaint. If the cough be free and not accompanied by much pain, it is probably connected with simple bronchitis; but if, on the contrary, it be short and dry, and the patient evidently endeavors to suppress it, then, although less marked and protracted than in the other case, yet it is infinitely more dangerous, and is probably indicative of inflammation of the lung itself and the surrounding pleura.

The expectoration is also characteristic. It is extremely viscid and tenacious, and is so intimately mixed with small quantities of blood, that you do not, as in bronchitis, find it streaked, but presenting a rusty appearance. The viscidity of the expectoration is sometimes as great as that of calves'-foot jelly, and it sometimes comes out of the vessel containing it in a mass. When this expectoration appears, we need not hesitate to say that the patient has pneumonia, as there is no other disease in which it occurs. But you must sometimes examine the sputa closely in order to recognize this characteristic appearance. In some cases there are only a few small specks, yet so distinctly marked as to indicate alone the existence of pneumonia. And I would remark that this is no indication of the extent or violence of the disease, for in some of the most severe cases there is very little of it. It only shows that it is occasionally expectorated unmixed, and appears as I have already described. As the inflammation ceases the expectoration becomes simply catarrhal, the characteristic expectoration entirely ceases, and nothing of the kind appears.

Now with regard to the respiration, I remarked that where the disease is fully developed it becomes high, differing from what obtains in a case of pleurisy. And the explanation is easy, for in pneumonia the lungs cannot in the act of respiration sink to their natural level, in consequence of the air vesicles being distended with concrete lymph,—the respiration is therefore carried on between two higher planes than natural, and consequently with an increased effort. But in pleurisy the respiration is carried on between two planes less elevated than natural, in consequence of the pressure of the effused fluid in the pleura.

With respect to the physical signs, there is only one of which I will speak at this time, and that is the crepitant rale which is pathognomonic of pneumonia in its early stages, and where active treatment will most likely be attended with success. I wish to draw to it your particular attention. It is heard only during respiration. It is equal—that is, the air-bubbles appear of equal size. It is dry and very fine, sharp too, very much like the crepitating sound produced by throwing salt on the fire, or rubbing hair between the fingers. Now this is entirely distinct from the mucous rattle,—which is sometimes confounded with it,—which is heard during inspiration and expiration; whereas the former apparently issues from a circumscribed spot, and does not pass and repass the ear as the mucous rattle does; so that a person who has once recognized the distinction between the two rattles, cannot by any possibility afterwards mistake the one for the other. Now with regard to the returning crepitant rattle, I may remark that it indicates the occurrence of resolution, and it gradually assumes the character of a mucous rattle. Now when suppuration takes place in a lung, you may, as it advances, have the mucous rattle developed, and how can you know that in one case to be indicative of resolution and in another of suppuration? Very easily. In cases of suppuration you will have an aggravation of all the symptoms, whereas in resolution the general symptoms give way, the sound on percussion becomes more clear, and healthy respiration is gradually established. Now it is important to notice this returning crepitant rattle on one account. I have frequently seen patients in whom resolution had very far advanced, and whose case was, perhaps, in its early stages doubtful to the physician in attendance, but the true nature of which was perfectly evident to me from this rattle,—that is, from hearing it not on both sides, but only on the one side. If, in doubtful cases, then, you hear on one side this rattle, you may be confident that the case is one of pneumonia. This rattle frequently remains long after the period of resolution, and when the patient is entirely convalescent, because it is simply an indication of debility. Thus we see in cases of erysipelas, that after the disease is entirely gone, the parts remain swollen, from the effusion of serum into the cellular tissue producing œdema of the extremities, which, however, gradually disappear as the patient recovers health and strength. Just so in pneumonia,—there is a disposition frequently to pouring out of serous fluid into the air vesicles, which keeps up the crepitant rattle, generally subsiding as the patient recovers strength. I mention this because the existence of the rattle at this stage of the disease might, in a given case, lead you to imagine that the disease was not entirely cured, and that therefore the patient required the active treatment to be protracted. These are, I believe, the most important symptoms which we notice in connection with the common form of pneumonia as it develops itself in adults.

Now what is the difference in the symptoms of pneumonia as it is developed in old people? The general features of the disease are, it is true, the same, but there are some peculiarities which demand our notice. In one half of the cases the superior portion of the lung is affected, and therefore in one half of the cases you may expect to find the signs of the existence of the disease there. The same physical signs are presented in the case of old people as in adults, but in a different site. In old people, we must remember that the disease is apt to develop itself in the course of some chronic affection, and is therefore likely to assume, from the commencement, the typhoid character. It is, therefore, not uncommon in these cases to find the active symptoms of inflammation absent even from the first invasion of the disease, and to have merely slight febrile reaction, dry tongue, and disposition to coma, exhibiting evidence of typhoid disease rather than an acute affection. And all this is easily accounted for by the debility of old people.

Again, in old people the disease is more rapid in its progress and more generally fatal than in younger subjects. Nine or ten days is the usual period of the disease.

Now when pneumonia affects children, it assumes in many cases the character of the disease as developed in adults, but in the majority of cases it does not. In children, the disease should be studied as presenting itself in two forms—as the simple pneumonia of adults, and which is more frequently the case, and complicated with some other disease. In the former case it almost always commences with symptoms of catarrh. But sooner or later, usually in the course of two or three days, the symptoms undergo an instantaneous change. Acute inflammatory symptoms appear. The child seems much oppressed and is disposed to lie in bed; its appetite is lost; the respiration is extremely labored and oppressed; the characteristic dry, suppressed cough sets in. If we examine the little patient at this early period of the disease, there is great reason to fear that we will not discover any thing—no flatness on percussion, or abnormal sounds of respiration, and yet there is every reason to fear an active inflammatory affection of the pulmonary tissue. The reason of this is, that in children the disease assumes a lobular form—attacks those little lozenge-shaped lobules which form, you know, the substance of the lung. And these inflamed spots are surrounded by healthy lung. Thus the affected portions are scattered over the lung, and the physical signs are therefore not developed as in cases where a continuous portion of the lung is affected. A little lobule, if affected, will not develope flatness on percussion, or produce a change in the respiration; but a number of them affected in a mass, would give distinct physical signs. But as the disease progresses, and lobule after lobule becomes affected, then the physical signs become as distinctly marked as in any case. We generally notice in such cases that the first change is the dulness on percussion, but in connection with this we can also commonly recognize a change in the respiration, which assumes the bronchial character, indicative of the second stage of pneumonia; frequently, however, before this, we can hear the crepitant rattle. I direct particular attention to this because some good observers, and Dr. Gerhard amongst them, deny the occurrence of this in children. But I have so frequently observed it, that I can unhesitatingly state that it is by no means uncommon in the disease as affecting children. As I remarked, however, lobule after lobule gradually becomes affected, and then we say that pneumonia is generalized—and then the flatness on percussion, the bronchial respiration, and other evidences of pulmonary inflammation, are as distinct as in the pneumonia of adults. Frequently, in these cases, I can mark the progress of the disease as distinctly as in children, and observe that the disease shows a disposition to climb up the lung, if I may so express myself, passing over the superfices rather than penetrating into the pulmonary tissue. It is usually accompanied by great oppression, the cough is urgent, the febrile reaction intense, the pulse very much accelerated, and the disease exhibits all the characteristic marks of an acute inflammatory affection. As the disease advances to a fatal termination, all the symptoms increase in intensity—the child gradually sinks—the countenance becomes livid—the extremities cold—and the little patient at length dies of slow suffocation. In cases of recovery, the febrile symptoms gradually abate, the cough becomes less frequent and severe, the respiration becomes more natural, the pulse regains its natural character, and a gradual restoration to health ensues.

This is the usual progress of the disease in robust, healthy, plethoric children; but this is not the most common form as it attacks children. The most common form is that in which the pneumonia is complicated with some other disease; such as hooping-cough, or scarlet fever, or during the progress of dentition. And it is infinitely more important to study the disease in this aspect, as it developes itself in the most insidious manner imaginable. There is in these cases no particular febrile action, very little loss of appetite, very slight oppression of the respiration, very little cough, and if any at all, it is so dry and unattended by pain as almost to escape observation. But as lobule after lobule becomes affected, the symptoms become more fully developed, but still in so insidious a manner as to avoid discovery unless by the aid of percussion and auscultation. You must recollect that in these cases, the physical signs have their seat precisely as in all other cases, at the lower and inferior part of the lung. Here we find bronchial respiration, dulness on percussion; and thus we are enabled to diagnose in doubtful cases that the probability is that the disease is pneumonia and not tubercular consumption, because in the latter case the physical signs of disease are developed in the superior part of the lung, under the clavicle. This form of the disease is extremely chronic, and its duration may be set down as between two and three months. The point on which I wish particularly to insist, is that in these cases where pneumonia developes itself in connection with some other disease, it is very frequently *latent*. For instance, we have it occurring every day in the course of common continued fevers. The symptoms become greatly aggravated, and it is perhaps only after death that the discovery of the pneumonic disease is made. So in cases of hooping-cough, small-pox, scarlet fever and measles, the patient may be affected with this latent pneumonia, which may never be discovered unless the physician be accustomed to the practice of auscultation. In the same way pneumonia may occur in the course of many diseases, such as chronic affections of the heart and of the bowels, and even in phthisis, and its existence never be suspected and of course never discovered.

I come now to conclude these remarks by the annunciation of one general fact, that is the explanation of the reason why the affection is so often latent. It would seem as if all the sympathies of the system are swallowed up in the former disease. The pre-existing disease prevents the full development of the symptoms of the pneumonia which supervenes. It is in such cases, however, that auscultation and percussion come so profitably to our aid—revealing in all their distinctness symptoms which would otherwise have so completely eluded detection.

REVIEW DEPARTMENT.

Medical Communications of the Massachusetts Medical Society. Vol. VII.—Part I. Boston: Printed for the Society. Power Press of Wm. S. Damrell. 1842 pp. 76.

We have just received this interesting document, the greater portion of which is occupied by the valuable and erudite Discourse delivered before the large and respectable body, whose transactions are here recorded. Dr. WILLIAMS chose as his subject a 'Medical History of the County of Franklin,' and from the manner in which he has discharged his task, we are fully justified in exhibiting his 'Discourse' as an excellent model of such valuable papers. We think our readers will all agree with us that such 'Chorographical' papers form most useful accessions to our professional literature, and that it is greatly to be regretted that they are so seldom offered.

After a succinct and interesting account of the topography and climate of Franklin County, Dr. WILLIAMS proceeds to speak of its

DISEASES, EPIDEMICS, ETC.

The county of Franklin was thinly inhabited for nearly three quarters of a century, after the first settlers planted themselves upon its soil. Deerfield was first settled in 1672, and was incorporated in 1682. The pioneers of the forest were so much annoyed by the Indians that they hardly obtained permanent foothold here before the commencement of the year 1700. At the time of the destruction of the town by the French and Indians, in 1703-4, there were four hundred and eighty inhabitants in this town. About one hundred and sixty of these were either killed or carried away captive to Canada. Settlements in this section of the country progressed tardily from that gloomy period. From 1682 to 1753 there were but two other towns incorporated in this county, viz., Northfield in 1715, and Sunderland in 1718, and there were but few inhabitants in either of these places. From 1753 to 1775 but twelve other towns were incorporated in this county. I believe my grandfather, Dr. Thomas Williams, was the first regular physician who ever established himself in this county. He settled in Deerfield in the year 1739, since which time, himself, his son, Dr. William Stoddard Williams, and myself have practised the profession of medicine in this town for a period of more than one hundred years.

I am not able to give an exact chronological history of our epidemics since the year 1735. That year, I have learned from veracious accounts, the scarlet fever, which so extensively ravaged the coasts and interior towns in New England, and was so fatal as to be called 'the plague among children,' prevailed here to a considerable extent. It was again rife here in 1742. The winter of 1740-41 was the coldest ever known in America. A great many cattle perished from scarcity of fodder. Sickly seasons have often occurred after severe alternations of weather. I have no very accurate data upon which I can absolutely depend in relation to the dates of epidemic diseases here for a considerable period of time. As nearly as I can obtain information, the measles and canker-rash prevailed here in 1750. The dysentery prevailed here in 1751. The canker-rash was also prevalent here in 1756. The lung fever, as it was called, prevailed here in 1775. Although it is probable that many cases of this complaint occurred here almost every year, yet I shall only mention the times when it existed here with the greatest violence. The treatment of fever now is very different from what it was seventy-five years ago. It is now a very uncommon thing to see a case of fever run from sixty to ninety days before it comes to a crisis, as it often did then. Instead of smothering patients under bed-clothes, and confining them in close apartments, excluding every particle of air, and, as much as possible, of light, as was the practice at that time, we allow them the greatest abundance of air, and give them a liberal allowance of cold water. Mercury was not then employed in such quantities as at the present time. In consequence of the improvements which have been made in the practice in fevers, they are not now, as formerly, considered to be the greatest outlets of human life. Fevers, however, on account of their causes being in a great measure removed, are not so common now, as formerly.

In 1777, the small-pox prevailed in the town of Deerfield, and a pest-house, or hospital, was established in a remote part of the town. It was supposed that it originated or was taken from some of the troops of the American revolutionary army, as they were often passing through this town, and as that complaint was almost constantly prevalent among them. The dysentery also prevailed extensively here at the same time, and also at Greenfield, Shelburne, and Conway. At the latter place there were seventy-three deaths from it that season. Conway, at that time, could not have contained more than one thousand inhabitants. Willard, in his History of Greenfield, says, 'In 1777 a great sickness prevailed here (Greenfield) and at Shelburne; fifty died in Greenfield, and eighty in Shelburne.' The population of Greenfield at that time was, probably, about nine hundred, and of Shelburne, about seven hundred; so that it, indeed, might be called 'a pestilence which walked at noonday.' The canker-rash prevailed extensively in Deerfield, and in some other towns in this county, from 1792 to 1795. Intermittent fevers also prevailed in Deerfield about the year 1794, in consequence of the erection of a dam across Deerfield river at Stebbins's meadow. This complaint had prevailed extensively in this town for several previous years, but in consequence of the drying up of the marshes by cultivating the soil, no cases have originated here since the commencement of the 19th century. In 1789, '90, '91, and '92, the scarlet fever and canker-rash prevailed at Rowe. The canker-rash prevailed in Hawley in 1794, and in 1830. It also prevailed in the adjoining town of Plainfield, in 1794, and in Buck-land, to a considerable extent, in 1838. The dysentery prevailed extensively in Warwick, in 1822 and 1824. Eleven died of this complaint in the former year, and sixteen in the latter.

Since the commencement of the 19th century, I have been able to procure rather more definite information in relation to the epidemics of the county,—though I am still deficient in data in relation to many of them. In 1802, the malignant epidemic dysentery prevailed at Greenfield and in Shelburne. The population of Greenfield at that time was not far from thirteen hundred. The whole number of deaths there that year was sixty-eight; fifty-seven died of the dysentery, and most of these were young people. The population of Shelburne at that time was not far from eleven hundred. Thirty-four deaths occurred that year in that town. The dysentery also prevailed extensively at Springfield. The mortality was so great that season from the dysentery, in Greenfield, that the stores were generally shut, and business of almost all kinds was suspended. There were scarcely well people enough to take care of the sick. Travellers avoided the place as much as possible,—and many who passed through the town tied mufflers over their faces to prevent inhaling infectious matter. Several families removed from the town, and particularly their children. Willard says, 'One hundred and one persons went away to other places in consequence of the sickness; and at one period there was not an inhabited house in the place where there was not one or more sick or dead. Five coffins were made on one Sabbath day alone! Some families lost five, some three, and some lost all their children. The first death occurred July 18th. Doctors Wells and Stone attributed the sickness to a scarcity of fruit so necessary in hot weather, to correct the bile, and to a putrid atmosphere occasioned by a great flood in June, that left stagnant water on the low lands, which by the intense heat of the weather, and being blown hither by the southerly winds, affected the air so sensibly as that its insalubrity might plainly be perceived by any one walking abroad in the evening.' On the 16th of August the wind blew up from the north-west, the rain fell copiously, the heat was mitigated, and most of the sick were recovering.

In the spring of 1803 the measles prevailed at Deerfield as an epidemic. It was followed in the summer by one of the most severe and mortal dysenteries which ever prevailed in this part of the world, in proportion to the number of inhabitants. It prevailed also in Conway and Northfield almost to as great an extent as at Deerfield, and likewise at Northampton, in the county of Hampshire, about sixteen miles south. I am not able to obtain the number of deaths in the two latter places, from it; but in Conway the whole number of deaths in 1803 was eighty-four, sixty of which were from the dysentery. Conway then contained not far from two thousand inhabitants. Why it should have prevailed in Greenfield, Shelburne, and Springfield, and not in Deerfield, Conway, Northfield, and Northampton the same years, is to me inexplicable. The weather in 1803 was hot and sultry, attended with a great many very severe thunder showers. It commenced at Deerfield in the month of June, much earlier in the season than that complaint usually begins, and did not terminate till after the severe frosts in November. What was very singular was, that almost every patient who was attacked with the dysentery, after having had the measles, died of that complaint. The disease in Deerfield was confined principally to the main street, then containing, probably, about three hundred and fifty inhabitants. There were but few cases in the remote parts of the town. The number of inhabitants that year in the whole of the town was, probably, not far from fourteen hundred. There were sixty-five deaths in this town that year; and fifty-four, at least, of these were from dysentery. As in Greenfield the year before, whole families sent their children abroad, and but few of them, who were thus sent away, were attacked with the complaint.

When we recollect that the disorder did not spread much out of the main street, and that it was confined almost to a population of not over five hundred, we come to the conclusion, that it was almost as fatal as the yellow fever in Philadelphia, in the year 1793, in proportion to the number of inhabitants. Its ravages were more fatal among infants than adults. It was not uncommon to see two and sometimes three funerals a day in one street, for several weeks in succession. It was of a very malignant and typhoid character, and seemed to yield to no remedies. I was then a youth, and, of course, not much acquainted with the details of practice in this complaint at that time. I understood, however, that the mercurial practice was the most effectual.

In the latter part of the summer and beginning of the autumn of 1807, the spotted fever, as it was then called, prevailed at Deerfield and at Greenfield. It commenced in a poor family at the west part of the town of Deerfield, in an isolated situation. There were various opinions as to the origin of it. Many supposed that one of the inmates of that family brought the disease from Hartford, where he had recently been, and where it was said the complaint prevailed. He had the disease rather lightly and recovered. Others believe that it originated in the family, which was dirty and poor. The house was old, and the floor loose. It was said that they were in the habit of raising a board in the floor, and throwing the offals and bones of their meals under it, and leaving them there to putrify. I shall not undertake to decide the question; but, certain it is, that several of the family had the complaint, and died in quick succession. Soon after, the disorder made its appearance in a neighboring family about a hundred rods off. Both these families, and all in which the fever prevailed, lived upon the side of a gently elevated mountain several hundred feet above the bed of Deerfield river, and in almost isolated situations.

To show the rapidity of the action of the complaint, I will mention the fact that my father was attending upon an obstetric case in that neighborhood, when one of the attendants, an aged lady, was taken unwell, and went home. She grew worse and sent for him, but he could not be spared. He went to her as soon as he could be released, which was in the course of an hour or two. When he arrived, the old lady was in the agonies of death, and she very soon expired. Very soon after, a little grand-daughter of the old lady was attacked in my father's arms, with the same complaint, and in a few minutes it died. While the attendants were laying out the old lady and child, the mother of the child, and daughter of the old lady, was attacked with the same complaint, and in less than twelve hours from the first attack of this fever in this family, the grandmother, the mother, and the grand-daughter lay corpses in the same room! The complaint spread in a few families, when it was arrested, and never more made its appearance there. A few cases of it, however, occurred at the northwest part of the town, in Greenfield, and in various other parts of the county the next year, and was quite mortal. It soon subsided, and afterwards, for a few years, we had only a few scattered cases. It prevailed, however, in Worcester county, and several other parts of Massachusetts with a good deal of violence. Since then there has been but little of it in the State.

Early in the winter of 1814, a malignant epidemic commenced in this county, and prevailed in most of the towns in it, and in fact throughout the country. The common name for it was lung-fever, war-fever, &c. The technical name for it was pneumonia typhoides, but perhaps it was erroneously so called, as many of the patients had no affection of the lungs at all. The fever originated in the army on the western frontier in the year 1812 or '13, and, on that account, it was by many called the war-fever. This complaint was confined almost exclusively to old people; and it is a fact worth noticing, so far as my observation extended, not a person over sixty years of age, ever recovered from an attack of it. It was extremely mortal, and the symptoms rapidly ran on to typhus, and speedily terminated the life of the sufferer. Twenty-eight people died in the town of Deerfield, in the short space of two months. As the weather grew mild, the complaint in some measure subsided. A few scattering cases occurred in 1815.

In 1831 and '32, the scarlet fever was very prevalent in Greenfield, Deerfield, and various other parts of the county; and it will be seen by observations which I have made a short time since, that it has prevailed in scattered cases throughout the county both before and since. In some towns it has even prevailed as an epidemic. In the above-mentioned years, and in some others, it assumed a very malignant character. It was confined very generally to children. In 1831 there were fifty deaths in Deerfield, principally from this complaint.

In 1831, the typhus fever, according to Dr. Dorrance, prevailed extensively in Sunderland. This town, lying on the east bank of the Connecticut river, then contained about seven hundred inhabitants. The town had been unusually healthy up to this period, when, in the early part of winter, the scarlet fever and hooping cough prevailed extensively there. Soon after, typhus fever commenced, and up to November, sixty cases occurred in that neighborhood. Six weeks after, the same fever again commenced and spread rapidly, until 'one hundred, principally in the village of fifty houses and perhaps three hundred inhabitants, were the subjects of it. Of three hundred cases, nine proved fatal.' Fevers of a typhoid character have prevailed sporadically, and in some cases almost as epidemics, in various parts of the county at different times, and what is very astonishing, within a few years they have been more prevalent upon our elevated mountains than in the valleys.

The dysentery prevailed in several towns in this county in the year 1811. The season had been unusually dry a long while before, and the first cases which occurred came on about the first of August. It seemed to follow the courses of streams, and was most severe in the towns of Deerfield and Greenfield. There were nearly one hundred cases in each of these towns, and these were confined almost exclusively to the town streets, so called, in both these places. There were but few deaths, and it is supposed by the physicians who attended the complaint, that the astringent method of treating it had much efficacy in arresting the ravages of death from it. After the first evacuations, it was not uncommon to administer from twenty to sixty grains of the sugar of lead in a day, and from five to ten grains of opium, with decidedly beneficial effects.

These are the principal epidemics which have prevailed in the county to any great extent, so far as I can ascertain. Undoubtedly some have been overlooked, for the want of more precise information. The most prevalent complaints in the county are pneumonic affections, which often terminate in consumption; fevers, principally of the typhoid character, especially upon our mountains, and particularly in the cold months. Croup is a common complaint among infants, especially in the valleys. Bowel complaints, such as diarrhœa, dysentery, cholera morbus, &c., prevail in summer. I cannot enter into a detail of our complaints, but must refer to the subjoined bills of mortality, for many towns in the county, for particulars. I have taken great pains to procure these bills for some time past, but I have not been able to procure as complete returns as I could wish. I have written to several physicians, clergymen, and other gentlemen in the county, for returns of deaths in the several towns in which they reside, for the purpose of giving the average mortality of the county. In several instances I have received documents of great value from them on this subject, and I feel myself under peculiar obligations to them, for forwarding to me the statements of the deaths in their several towns, with their remarks. I am aware that the details from each town are attended with great, and, in many instances, with protracted labor. I hope they will accept my grateful thanks for their kind services. I have personally visited many of the towns, and examined the town or parish registers, and copied these bills at length for this purpose. I have spared no pains to give full returns for the county, but still they are imperfect, as I have not been able to procure a list of more than fifteen towns. The task of procuring the facts for the tables has not been the greatest. That of arranging them, and particularly that of drawing the average mortality of each town, to adapt it to the county, has been attended with more labor, than those who have never pursued such investigations can readily imagine. After all, the result for the county may not, possibly, be true to a fraction.

I have adopted a process somewhat like the following in the tables of mortality of the towns from which I have received data. I have procured the amount of the deaths in all these towns, and then divided the sums by the number of towns. For instance, I take the town of Deerfield for forty-nine years, and divide the number of deaths into decennial periods. The deaths in these forty-nine years were 950, which average 19 and 38-100th a year. The population, from 1787 to 1797, the first decennial period, was about 1330. The deaths in this period were 116, or, on an average, 11 6-10ths a year. Population in 1800, 1537. Deaths between 1797 and 1807, 205, or 20 and 5-10ths a year. Population in 1810, 1570. Deaths between 1807 and 1817, 225, or 22 and 5-10ths a year. Population in 1820, about 1892. Deaths between 1817 and 1827, 169, or 16 and 9-10ths a year. Population in 1830, 2003. Deaths from 1827 to 1836 (nine years), 231, or 25 and 6-10ths a year. For the first ten years, there was one death in one hundred and fourteen inhabitants. For the second ten, one in seventy-five. For the third ten, one in seventy. For the fourth ten, one in one hundred and ten. For the fifth, one in seventy-eight. Average for the forty-nine years, one in 86 inhabitants. In this way I make the average mortality for all the towns which I have heard from in the county, to be about one in 80 inhabitants. The lowest mortality in any town, as shown by the tables, was about one in ninety two, and the highest about one in sixty. This was, however, less than a decennial period. Had it been extended to four or five such periods, there can be no doubt that the result would have been more favorable. That is considered to be a healthy country where the average mortality is one in sixty. According to this, Franklin county much more than averages the healthy standard.

From all the towns heard from in this county, eleven have died over 100 years of age. One of these lived to the age of 117, and one to that of 106. In nine towns, in forty-four years, twenty-one have died between the ages of 95 and 100. Sixty-six between 90 and 100, and in the same number of towns for the same period, three hundred and thirty-six were between 80 and 90 years of age.

It has been questioned by some whether pulmonary consumption is actually on the increase in the county, or not. In some towns it will be perceived by reference to the tables, that it is increasing among us, while in some, perhaps, it is not. In the town of Deerfield, for instance, with an average population for 55 years of about 1500, there have been 144 deaths from it; while in Conway, an adjoining town, for about the same period and about the same number of inhabitants, there have been but 76 deaths from it. Some of my correspondents in the western part of the county say it is certainly on the increase with them. Dr. Gould, of Rowe, says, there were in that town ten deaths from it in one year. This, however, was a very uncommon and in fact a solitary instance. In the town of Greenfield, I understand, with a much larger population, there were a few years ago, two years without a single death from this direful complaint. This is as singular as the fact in relation to Rowe. As nearly as I can estimate, about one-sixth of the deaths in this county are from consumption.

Dr. Williams then gives some exceedingly interesting biographical details of distinguished physicians who have flourished in this region of our free land, and which we mean to transfer to our columns hereafter.

The History, Pathology, and Treatment of Puerperal Fever and Crural Phlebitis.

I. A Treatise on the Epidemic Puerperal Fever of Aberdeen. By Alexander Gordon, M. D.
II. A Treatise on the Puerperal Fever: illustrated by cases which occurred in Leeds and its vicinity in the years 1809–12. By William Hey, Esq.
III. Facts and Observations relative to the Fever commonly called Puerperal. By John Armstrong, M. D.
IV. On Puerperal Fever and Crural Phlebitis. By Robert Lee, M. D., F. R. S.

With an Introductory Essay, by Charles D. Meigs, M. D., Professor of Obstetrics in Jefferson Medical College. Philadelphia: Barrington & Haswell; New York: J. & H. G. Langley. 1842. 8vo. pp. 338.

We have peculiar satisfaction, in announcing the publication of this very judiciously arranged series of treatises, on one of the most important and interesting diseases, which demand the attention of the physician. The work forms the contents of the 'Library' portion of the last number of that valuable periodical—'*The Select Medical Library and Bulletin of Medical Science*,' so ably edited by Dr. John Bell. Dr. Meigs' Introductory Essay is concise and judicious, and will be read with profit. He speaks in the highest terms of commendation of Dr. Gordon's invaluable treatise—a treatise which cannot be too generally diffused and studied. Altogether this volume presents the most acceptable and useful compend of the doctrines and practice of the best authorities, with regard to 'Puerperal Fever' with which we have ever met; and we trust that the adequate appreciation of the judgment and taste of the Editor, will be discovered in an extensive sale of the work.

Elements of Surgery. By Robert Liston, Surgeon to the North London Hospital, Professor of Clinical Surgery, &c. &c. From the Second London Edition, with copious Notes and Additions, by Samuel D. Gross, M. D., Professor of Surgery in the Louisville Medical Institute, &c. &c. Illustrated with numerous Engravings. Philadelphia: Barrington & Haswell; New York: J. & H. G. Langley. 1842. 8vo. pp. 640.

The profession is really indebted to the highly respectable publishers of this elegant and invaluable volume. Mr. Liston's reputation as a clear, accurate, and scientific surgical writer, is so widely known and admitted, that formal panegyric is quite unnecessary. What a vivid contrast is in this work presented, to the puerile, garrulous, wandering discourses of some so-called teachers of the science of surgery! It is on one side, the dignified and earnest man of science,—on the other, the egotistical mountebank!

Dr. Gross has discharged his duties as Editor, with all the sound sense, accurate discrimination, and experienced judgment, which all who knew him expected. The additions and notes, are indeed profitable and interesting; and our only regret is, that they are not still more numerous than they are. The volume is inscribed to Professor Parker, of the College of Physicians and Surgeons in this city,—the beauty of its typography, and 'getting up,' will be readily taken for granted by all who know the publishers,—and the illustrative engravings are executed in a style very creditable to American art. The work can be obtained in this city at the large and well-arranged book establishment of the Messrs. Langley.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, August 20, 1842.

The desperate efforts of a paltry and mercenary *clique*, to cast discredit and odium on the great cause of medical educational reform, and our humble advocacy of it, have even already recoiled, with retributive justice, on the heads of their silly authors. Public attention has been closely and keenly attracted to that medical institution, whose managers had the hardihood to declare open war, against the best interests of the science, which they professed to teach, because they feared that their 'craft were endangered,' if the proposed reform met approval and adoption. And the necessary result has been that an impression, any thing but favorable with regard to the establishment referred to, has been produced, not only on the intelligent members of the profession, but on the public mind. At the same time, the agitation of this great question, has not only wrought out a clear and warning revelation of the character, motives, objects, and spirit of the interested enemies of reform; but has also aroused from their apathy, many true but inactive friends of the good cause, and excited to new and vigorous exertion, others, who were faithful, but wanted the cheering influence of the conviction that they did not labor alone.

In a recent number of our excellent contemporary—the *Boston Medical and Surgical Journal*, we find a very interesting article, which, as it refers in terms of merited severity, to some of the obnoxious features of the system of education, at present, generally adopted, and as it does justice to a most meritorious institution—the Medical Department of the University of Virginia—we have great pleasure in transferring to our columns.

University of Virginia.

In the faculty of medicine in this institution there are three professors, who are men of high attainments, and are abundantly able to sustain the reputation of the several departments assigned them. Unlike all other medical schools, the session is just as long as the academy term, viz., ten months. Two lectures, only, are given on the same day, which allows a student reasonable time for intellectually digesting what he may have heard. *The forcing-pump system is not practised at the University;* they know nothing of the custom, practically, of *crowding the class with from six to ten lectures in a single day—as though their very lives depended upon the rapidity with which sound, rather than ideas,* entered the ears of the pupils. Again, immediately before each lecture, the students are subjected to a full and rigid examination on the subjects of the preceding day. That thoroughly educated surgeons and physicians are sent from the University, cannot be questioned, and this always will be the case whilst the present efficient regulations are enforced.

But there is one feature in the character of this school, so unlike that of any other amongst us, and yet so much in advance of them all in one particular respect, that not to proclaim it loudly, would do the institution injustice. It is, that 'any person of approved moral conduct may offer as a candidate for graduation, and receive the degree of M. D. without reference to the time he has been engaged in the study of medicine, or of joining the school, provided he undergoes, in a satisfactory manner, the various examinations prescribed by the enactments.' Here is an actual advancement in the mode of conferring degrees, which might be copied in other institutions, to the manifest advantage of society and the general interest of the institutions themselves. The faculty does not inquire of the candidate for their honors, whether he has studied five years or five days; but simply examines him in all that appertains to the knowledge which the Statutes of the Legislature and the University declare to be the full measure of a doctor in medicine. If he sustains himself in the trial, he is at once presented with a testimonial of his attainments. Either this natural and philosophical system—which is essentially a common-sense affair—must ultimately be imitated by neighboring colleges, or we imagine the current will certainly by-and-by set in the direction of Virginia. Students of advanced standing, not unfrequently go from one school to another the same season, *not to acquire knowledge, but to get the tickets, and then they are candidates for examination.* Yet with one single course of lectures some individuals *would pass a far more satisfactory examination than many who have been matriculated at all the schools from Maine to Georgia.* Not that they have acquired it all in a single term, by any means; for they may have been years pursuing the same train of thought, and have kept pace with the discoveries and improvements that characterize the progress of medicine and all its collateral and dependent branches. Still, in consequence of not having dragged out the whole length of that heavy chain which custom, but not reason, requires to be drawn through the space of three or five years, they must be pupils till they die, if they do not conform to certain laws, which the University of Virginia has wisely discarded. *Let those who control the destiny of medical schools look to this fact*—for *a revolution will certainly be brought about, and that without failure,* before the present generation has passed from the theatre of life.

The *Boston Journal* is now surely as guilty as the *New York Lancet!* If we have chastised with whips, the gentry who pretend to teach medicine and surgery without clinical instruction, and merely by cramming lectures down the throats of their students, our *Boston* friend has chastised them with scorpions. In the next 'Annual Announcement' of the 'Stuyvesant Institute School of Medicine and Pharmacy,' we may, of course, expect to find Dr. Smith posted, in language gentlemanly and grammatical,—'the traducer of the medical profession of the United States, and all her medical institutions!'

THE MEDICO-CHIRURGICAL REPORTER.

Cases of Laceration of the Iris.

BY MIDDLETON GOLDSMITH, M. D.,

Prosector in Surgery, College of Physicians and Surgeons, New York.

TO THE EDITOR OF THE LANCET.

Dear Sir :—

I select from my case-book two instances of laceration of the iris, as possessing some interest to the medical reader.

Case I.—Anne Nicholson, æt. 40—Irish woman—laboring woman—serving at 37½ Orange street—applied June 11th, 1842. She received, four weeks before, a blow upon the right eye from a stick of wood. The blow was directed from without inwards. She vomited freely in about fifteen minutes after the injury, and several times during the next day. The iris was torn from its attachment to the ciliary body for about one-third of its extent. The laceration occupied the lower and external part. She complained of great pain in the brow and eye, and saw continued flashes of light until the third day preceding her application to me. The eye then presented the zonula iritica—vision is entirely lost. There is no pain—the sight of the other eye is impaired—its iris is sluggish.

I put this patient upon the use of blue pill to ptyalism—cupped the temple, and put blisters behind each ear. On the 18th her mouth began to get sore, and on the 19th she could distinguish light with the injured eye. The zone around the cornea was gradually disappearing, and vision was perfect in the left eye.

I continued this treatment for three weeks, at the end of which time she could see to walk about with the injured eye. The wound still remained open. Since that time I have not seen her. None of the tunics of the eye were injured.

Case II.—Mary Mulligan, æt. 29—Irish woman—married—mother of two children—while stooping over a tub of water in which were placed a number of spruce-beer bottles, received, as she was opening one of them, the cork, full upon the cornea of the left eye. She fainted twice, grew sick at the stomach, and in about an hour afterwards vomited freely three times. The pain, at first excessive, abated soon after. She kept applied to the eye during the night cold poultices, which seemed to give relief. There was extensive ecchymosis of both lids. On the succeeding day she took a dose of senna and salts, which operated freely, and she felt better afterwards. The eye was then kept wet and cool with sugar of lead wash. This constituted the whole treatment until she came under my charge on Tuesday, August 25th, 1841.

Her skin is thin and delicate—hair light—nails irregularly formed. Her mother's family consumptive—father's, healthy. She suffers some from rheumatic pains, but is otherwise healthy. The right pupil is small; the iris a bluish gray. In the left eye the iris is separated from its attachment at the ciliary ring through one-third of its extent, above and inwards, and the detached portion hangs down in a loop into and across the pupil, thus forming two openings for the admission of light. The natural pupil is dilated to the utmost. The iris is immoveable, except the detached portion, which flickers with every motion of the eye. The conjunctiva is slightly injected. There is the vascular zone around the cornea, extending on either side beyond the extremities of the laceration. There is no perceptible injury of the external tunics. The globe feels soft and somewhat atrophied. Vision is totally gone. There is now, and there has been ever since the injury, a dull and heavy pain around the brow and temple, and through the ball a sharp shooting pain. There have been continually flashes of light. She complains of weakness in the uninjured eye; vision sometimes indistinct and painful. Tongue clean; bowels open.

℞ Prot: Chlor: Hydr: ℈j.
Pulv: Doveri ʒj.
Ft: ch: twelve, one each night.

℞ Extr: Bellad:
" Opii:
Ung: Hydr: āā ʒij.
To be rubbed on the brow and temple.
Blister behind the ear.

Thursday.—Tongue clean; bowels costive; pain much less in the globe and brow; says she can see the light through the aperture, and could see through the pupil persons across the floor. Ordered laxative—warm pediluvia—continue the rest.

28th.—Gums touched; vascularity of the conjunctiva lessened; zone less; face pale; has mercurial irritation. Discontinue powder; give instead—

℞ Quinniæ ℈j.
Calomel gr. vi.
Opii gr. v.
Ft: pil: ten. One each night.

29th.—Eye less red; mouth sore; begins to distinguish colors; can tell yellow from red; the sound eye feels stronger.

30th.—Still a good deal of pain; sleeps badly. Give Dover's powder—discontinue pills.

31st.—Complains of great weakness; fever; pale; hands cold; pulse quick, frequent, feeble; inflammation nearly gone; distinguishes all colors except blue. Ordered five grains of quinine per diem.

I need hardly trouble you with the details of the treatment of this case; suffice it to say that the mercurial action was kept up, guarded however by the quinine and opium. Counter-irritation was persevered in until the date of the cure, the 26th of the succeeding month. After the ability to distinguish colors came that of distinguishing shades of color. The eye progressively improved until the woman was able to read ordinary print, though all vision in that eye was necessarily confused, from the fact of there being two inlets for the light.

There is one fact pertaining to both of these cases which, if correctly represented by the patients, I can hardly understand; there seems not to have been the least hæmorrhage in either case. Now, apart from the fact that lacerated wounds do not bleed freely, and sometimes, indeed, scarcely at all, I have found in every case in which I have wounded the iris, even though I lacerated it, the hæmorrhage was considerable.

In the second place, it is an interesting inquiry, how is this laceration produced without injury to the external tunics?

In the third place, from the flashes of light, the peculiarity of pain, and the loss of sight,—how much may we infer that the retina was implicated in the inflammatory action?

And fourthly, would it not be sound surgery to excise the detached portion of the iris, in the hope of getting rid of the confusion of vision by extending the two pupils into one?

I am, dear sir, yours, &c.

M. Goldsmith, M. D.

New York, August 15th, 1842.

Death of another Thomsonian or Animal Magnetised Victim.

BY STEPHEN W. WILLIAMS, M. D.

Late Lecturer on Botany and Medical Jurisprudence in Dartmouth Medical College, N. H., &c.

TO THE EDITOR OF THE LANCET.

Dear Sir:—

I have not deemed an answer necessary, to a reply to a communication of mine upon the death of a Thomsonian victim, published in one of the numbers of the Lancet, April 16th, by M. Mattson. When a man tells me he can hold his finger for any length of time in a blazing fire without burning it, I shall not believe him. So when he says that lobelia inflata (Indian tobacco or Devil's pepper) is not an *irritative, acrid, narcotic poison*, capable, like other poisons, of inducing death, in opposition to the high authorities of Orfila, Pereira, Lindley, Beck, Bigelow, Coxe, Barton, Thatcher, Rafinesque, and a host of others, who stand in the front rank of the profession of medicine, I certainly shall not believe him, and shall consider any attempt at a refutation of so absurd a proposition, as entirely puerile To enable the medical public better to decide upon the subject, I present you with another case, which will answer very well to accompany my former one.

Towards the close of the year 1840, I, with several of my professional brethren, was requested to examine the dead body of the daughter of J. K., who had recently died at the age of 27 years. She had been sick about ten days, previous to her death. As she had been altogether under the care of animal magnetisers and steamers, and as no regular physician had seen her until she was in *articulo mortis*, or was actually dying, we endeavored in vain to obtain a history of her case.

Post-mortem.—No unusual appearances presented upon the external examination. Little emaciation. The fat was nearly an inch and a half thick upon the abdomen. There were the scars of three recent blisters upon her leg and wrist. The abdomen and thorax were both laid open at the same time. The first viscera which were removed were the stomach and bowels. Then the kidneys were examined and both found healthy. The spleen was very large and turgid. The liver was perfectly healthy, as were also the pancreas, the uterus, the ovaria, and the bladder. The heart and valves were natural. The lungs were also natural, and there was less adhesion of them than common. What adhesion there was, was at the upper part of the left lobe of the lung. There was a perfect crepitation of them. The air cells of the bronchiæ were free. No more mucus in them than natural. There was a slight trace of an old thickening of a very little portion of them, which had no connection with the complaint of which she died. It was simply a slight induration. Upon laying open the stomach we discovered numerous patches of inflammation in the villous coat of it. There was nearly half a pint of light greenish fluid in it. There was a good deal of thickening in the mucous coat of the duodenum, and inflammation in various parts of it. There was also a good deal of inflammation in the small intestines, and this inflammation seemed to increase the lower down we proceeded with our dissection. The vessels about Peyer's glands were a good deal inflamed, but the glands themselves were not ulcerated. The same inflammation extended through the colon, both above and below the arch. There was, likewise, much inflammation, and thickening of the rectum, the blood-vessels arborescing throughout the whole extent of it. The vessels of the brain were very little injected, scarce enough to constitute disease. There was also a trifle of serum on the surface of the brain, but perhaps not much more than natural. The principal disease in this case appeared to be in the bowels, but as we could get no definite information in relation to the symptoms and treatment, we are left somewhat in the dark in relation to the cause of it. We understood that there had been numerous injections used in this case, and if they were composed of lobelia and other acrid stimulants, which the steamers are in the habit of using, it will very readily account for the high inflammation of the rectum. As I stated in my former communication, I have known the most excruciating torture result from the application of such enemas; and if lobelia, cayenne, and the other heating remedies of the Thomsonians were administered in this case, it might as readily account for the inflammation of the stomach and the other intestines above mentioned.

This case produced a good deal of excitement at the time and place of its occurrence, and the public were very anxious for a thorough examination, which was accordingly made. One other patient in this family, who had been quite sick with a fever the preceding autumn, was thought by many to have been cured by the miraculous incantations and empirical medicines of the magnetisers, and when the subject under consideration was taken sick, she also was placed under their care. The result has shown how quick the work was done. The public, we trust, will now be soon undeceived, and ere long we shall hear no more of the miracles of the mysterious science, than we do of those of Prince Hohenloe, the ravings of Joanna Southcote, or the empiricism of bone-setter S. Still we have seen enough of the world to believe that 'ignorance and credulity have ever been companions, and have misled and enslaved mankind;' and so it will ever remain as long as they take delight in mystery, and in being gulled. When the delusion shall have passed away, another will take its place a little more mysterious, which will triumph a short time and die, when another still will succeed, and so continue till the end of time. Opposition spurs it into greater activity and virulence. Let it alone, and it will be sure to die from its own folly and delusion. Who ever reasoned a maniac out of his hallucination?

I am yours truly,

Stephen W. Williams, M. D

Deerfield, Mass., Aug. 10th, 1842.

Case of Fatal Hæmatemesis.

TO THE EDITOR OF THE NEW YORK LANCET.

J. T., a youth of nine years of age, had been complaining a few days of the usual symptoms of bilious fever, such as general lassitude, and languor of mind and body, want of appetite, pain in the joints and bones, slight headache, partially furred tongue, but still continued to go about until the morning of the 4th of July, and on that evening I was called in by the family, but did not arrive until the morning of the 5th. Found him in the following condition, viz: extremities cold, pulse weak, quick, and fluttering; countenance pale and anxious, and great restlessness; no sickness at the stomach, or pain in the bowels; and on percussion of the abdomen, found no tenderness or soreness about the stomach or bowels; was informed his condition was such as above given, up to the evening of the 4th of July, when he commenced vomiting and threw up large quantities of blood, liquid and coagulated,—some of it in large lumps, of the size of a hen's egg, surrounded by a kind of pseudo-membranous substance,—and, what is remarkable, this vomiting was not attended with a straining or great effort to throw up; he would just open the mouth, and with a slight effort it would flow out. On the morning of the 5th I found him as described, and prescribed a dose of calomel and rhubarb and an injection. Returned on that evening, found all the symptoms worse, and was informed he had two attacks of vomiting of blood since I was there; the latter was kept for my inspection, and I examined it closely and found it as above described. I prescribed some styptic, combined with morphine, in a solution of quinine, as I found his pulse indicated some stimulus, as he was evidently sinking fast. He became more prostrate every minute, and died about daylight on the morning of the 6th.

Here is a case of one and an half days standing, and in that short time running into death. What a powerful effect the cause produced, and how short a time it gave us to act, and how speedy and effectual must be our determinations! Yours,

W. D. Jefferson, M. D.

Jones' Bluff, South Alabama, July 19th, 1842.

THE COLLATERAL SCIENCES.

On Hippuric Acid.

BY ALEXANDER URE, M. D., A. M.

In a paper communicated by me to the Medico-Chirurgical Society in the month of January last, it was pointed out, for the first time, that when a certain portion of benzoid acid, or of a soluble benzoic salt, is introduced into the human stomach, a remarkable change takes place in its passage through the kidney. The urine voided in the course of a couple of hours after its ingestion, amounting usually to five or six ounces, will be found, upon adding a twelfth part of muriatic acid, to yield by-and-bye a copious precipitate of beautiful rose-pink acicular crystals. These, when examined by the microscope, exhibit the form of a four-sided prism, terminated by a dihedral summit. Now this is precisely the crystalline character of an acid peculiar to the urine of the horse, cow, and other graminivorous animals, and to which, for that reason, Liebeg has assigned the name of *hippuric*.

By this singular interchange of elements, capable of being effected only by the aid of vital chemistry, we have an organic product, uric acid, containing eight atoms of azote and ten of carbon, replaced by one, hippuric acid, containing no less than eighteen of carbon, and only two of azote! In pursuing the above investigations a step further, it was ascertained that no trace whatever of uric acid or any of its salts could be discovered in the urine in question. In point of fact it had been wholly superseded by the other acid.

The important circumstance connected with this research, as bearing upon medical practice, is, that the salts which this new acid forms with the ordinary bases occurring in the animal fluids, as soda, ammonia, and potash, are all of easy solubility. Thus hippurate of soda requires about two parts of water, at 60° Fahr. to dissolve it, whereas the corresponding uric salt, which constitutes, as is well known, the gouty concretions or chalk stones, is acknowledged to be nearly as insoluble as uric acid; it requires at least 4000 parts of water to dissolve one. Hippurate of ammonia again is but little less soluble than the hippurate of soda, while the urate of ammonia will only dissolve to the amount of 1-480th part. Hippurate of lime, the least soluble of these salts examined by me, requires eighteen parts of water to dissolve one.

The application of the above principle has proved of material benefit in the treatment of certain unhealthy conditions of the urine, occurring in subjects of a calculous or gouty diathesis; since it enables the practitioner to obviate entirely the various depositions resulting from excess of uric acid, the fruitful source of that most distressing malady, stone in the bladder; as also to control and prevent the formation of the so-called tophaceous concretions or chalk-stones, which occasion so much inconvenience, deformity, and pain to individuals laboring under gout.

By judicious exhibition of the benzoic acid, or, according to particular circumstances, of a benzoic salt, that is to say, apportioning the dose to the state of the renal secretion, best previously ascertained by analysis, we can fulfil the desired indication with unerring precision, and that, as shown in the above paper, without any risk of affecting the general health, or of irritating the urinary organs.

It is to be kept in mind that this plan of treatment by no means precludes the adoption of other suitable remedial measures. Of course certain rules of diet must be observed, which there is no necessity for referring to here. It would be equally irrelevant to occupy your time with the details of cases, several of which have lately come under my notice, and go to corroborate the statements above made.

As benzoic acid is apt to irritate the fauces, unless administered in a liquid state, and as it needs a large quantity of water to dissolve it, it will be found expedient to give it along with phosphate or biborate of soda; since they enhance its solubility without abating its specific power. Thus, four parts by weight, of the former, or one part and a half of the latter salt, will enable a comparatively small proportion of distilled water to take up one of the acid. This difficulty, as is obvious, does not apply to the benzoate of ammonia or of potash.

Phosphate of soda not only serves to hold benzoic acid, but likewise hippuric acid, in solution; and this is a point of some consequence, seeing that any excess of the latter acid, accidentally present in the urine, will remain dissolved by means of the neutral phosphate of soda, or the triple phosphate of soda and ammonia (microcosmic salt) naturally existing in that secretion. These phosphates, however, produce a very different effect upon the uric acid, inasmuch as they promptly convert it into urate of soda, by depriving the salt of one half of its base, and thereby transforming it into biphosphate. This fact, which recently presented itself to me in the course of some experiments, and which has not been heretofore noticed by any chemical authority, seems to furnish a simple and rational explanation of the mode of formation of urate of soda, the basis of chalk-stones. Hence, whenever the oxidizing process of the kidney is proceeding with such energy as to supply a superabundance of soluble phosphates on the one hand, and of uric acid on the other, there must inevitably result an excess of urate of soda.

Having premised the above observations with the mere view of pointing out what appears to cast some new light upon the importance of benzoic acid and its compounds, as therapeutical agents in virtue of their power of generating hippuric acid, it has appeared to me proper to indicate the distinguishing features of these two acids, as some objections have been started touching the difficulty of discriminating the one from the other. For convenience sake, the leading peculiarities have been arranged in collateral order, as follows:—

Benzoic Acid,	*Hippuric Acid* *
Crystallizes in hexagonal needles, or in white, diaphanous, pearly, flexible laminæ.	Crystallizes in four-sided prisms with dihedral summits.
Is soluble in two parts of ether.	Is very sparingly soluble in ether.
Is not changed by dilute nitric acid.	Treated with dilute nitric acid, and evaporated to dryness, produces, on the addition of ammonia, a beautiful purple color.
Heated with three times its weight of hydrate of lime generates simply benzole.	Heated with three times its weight of hydrate of lime disengages a quantity of ammonia.
Benzoate of Ammonia,	*Hippurate of Ammonia,*
On being exposed to a strong heat, melts and flies off in benzoic acid fumes, without leaving any appreciable residuum.	Exposed to heat, melts and assumes a rose-red color, forming a reddish acid; which being dissolved in water and evaporated, affords red crystals, resembling hippuric acid in their properties.
Benzoate of Potash,	*Hippurate of Potash,*
Burns without emitting any particular aromatic odor.	Heated so as to undergo decomposition, exhales the odor of bitter almonds.

On the whole, sulphuric ether furnishes the readiest test for distinguishing these two acids, from the easy solubility of the one, and the difficult solubility of the other in that menstruum.—*Prov. Med. and Surg. Jour.*

ITEMS AND INTELLIGENCE.

[The following article, is from the pen of one of the most accomplished female writers, in this or any other country, but who modestly shrinks from allowing her name to appear in connection with her very interesting paper. We have been promised a repetition of the favors of our fair correspondent,—an intimation, which will, we are sure, be as agreeable to our readers as to us. Some novel and important views on 'Light,' and the theory of vision, may be expected.—Ed. L.]

SPECTACLES.—MORE LIGHT—BETTER LIGHT.

The most curious theory advanced of late, is, that spectacles, or, 'glasses which are to aid the sight,' are entirely unnecessary. Many there are—those that never read at night and affect juvenility for a long time after they have lost all outward traces of it—who think this new mode is quite as great a discovery as the watch-maker did when he found out that certain glasses magnified.

It has been often asked how people managed before spectacles were invented. A little reflection would have taught the inquirer that before the art of printing was known, there could be no necessity for any assistance in this way, as there was no reading at night. Elderly men sat with their hands before them, or played at such table games as required little acute vision, and elderly women knitted, netted, and knotted. The young, of course, could sew or embroider, if they chose. It should be remembered, however, that in early times, people retired to rest when the rooks did, and in later days, the curfew (or cover fire) sent them to bed exactly at nine o'clock, and from that hour, no light, either of candle or fire, was allowed in the house, excepting in cases of extreme illness, attested by the physicians.

---

* The verifications were all made with hippuric acid derived from the human subject.

A reference, therefore, to the time when spectacles were unknown, is not illustrative of the soundness of the theory, neither will the testimonials of the aforesaid *would-be juveniles* be held worthy of regard. No one, whether he wishes to be thought younger than he is, or is even indifferent on the subject, puts spectacles on his nose before he is compelled to do it. In the first attempts at using them, there is a very uneasy sensation—something like 'a swimming in the head,' as they express it—and many persons lay them aside until the calls of vision are more urgent. In fact, until within a very few years, the wearing of spectacles appeared to be considered as a sort of disgrace. It was something which made the wearer apprehensive that you would consider him as descending so far into the valley of *Nod*, as to be unworthy of consultation, excepting on some sleepy unimportant business not requiring a wide-awake thought.

I shall not in this article go into the question of long or short sightedness, but merely observe, that our ancestors, long after spectacles came into general use, read and wrote by a very poor light. Lamps were not in use, spermaceti was not rendered into candles, and wax was too expensive. Nothing, therefore, gave light at night, but the *tallow* candle; and as our forefathers were a frugal race, even one of these candles was thought sufficient unless strangers were present. A man in those honest, old-fashioned days, never thought of reading in the day time; if he cast his eye over the most stirring paragraph of a gazette while at breakfast, he was content, and reserved the debates in Congress, and the phenomena and murders, until the cares of the day were over. How some of our ancient editors would stare to see the quantity of newspaper reading a man gets through with now—debates, speeches, official documents, reports, messages, trials, murders and all, at one sitting, and before he fairly begins the working business of the day!

Besides the large and small gazettes—is that term too dignified and aristocratic now?—there are reviews, magazines, pamphlets, and novels, and each editor and author is upon the stretch to make his work agreeable to the reader. All these *must* be read, and a man *must* take the evening to read them. How is he to do all this unless he have a pair of spectacles, for the moment the first half century has passed, and the clock strikes *one*, at the commencement of the *second* half century, his eyes are looking at a distance—looking forward, as it were to things *known* to be at a distance, and yet they appear dim to him. What puzzles him most is that he cannot see objects clearly when at the usual seeing distance, unless he put the candle between his eyes and the book. This is conclusive that the eye wants more light—that is to say, there must be more light thrown upon the book.

I come now to the main point of the argument, are spectacles necessary? Every reading man will tell you, that he has put off their use as long as he could, that he has doubled the light for a year or more since he discovered the decline of his vision, and that even this expedient has failed, so that he must either give up reading or assist his sight by glasses which possess a magnifying power.

There is no doubt that a man of fifty, or thereabouts, when his vision begins to fail, may do without spectacles for a twelvemonth, perhaps longer, if he reads sparingly, and takes pains to get good, clear light. Those who are obliged to economize strictly, are compelled to use *tallow* candles, or else vile lamps; the former hurt the vision, for the light from them is dull and uncertain, and the time occupied in snuffing them is grudgingly given, while the latter not only injure the sight but the lungs also. Unless lamps have glass shades, the atmosphere of the room soon becomes unfit for respiration, and these glass shades are very expensive too, for they are often broken.

I observed that men in ordinary circumstances were compelled to burn *tallow* candles, but as the great part of the community are *now* in ordinary circumstances, it becomes a serious question how the greatest quantity of light shall be obtained at the least expense. Spermaceti candles were a very great improvement upon the tallow ones, and the clarified sperms were an improvement upon the opake white sperms. But, alas! these necessary luxuries are now getting out of the reach of the reading community, who generally are not of the wealthier order, for these spermacetis are fixed at a price beyond their power to pay. Where the blame lies, it is impossible for those who are not initiated to say, for the whale fishing is as successful now as it ever was. One year there may be a falling off, but the next is good again, and political economists are bound to show up the average result. Judd's clarified spermaceti is fifty cents a pound to those who cannot buy a whole box, and forty six cents by the box; now, as No. 4 is the most economical candle to burn, who is there that can afford to give a shilling a piece for his candles!

In Europe, the process of clarification and hardening was effected by a preparation of arsenic; this soon excited the attention of the chemists, and an alarm was sounded immediately. But before any evil resulted for the constant emission of arsenic particles destroyed the purity of the atmosphere in the room—it was discovered that any menstruum having an alkaline base, could produce the same result as arsenic, and at one quarter of the expense. It is this alkalescent quality in one of the ingredients now used, which gives Judd's candles that beautiful lustre, and renders them so smooth and hard. A shilling for one candle is an extravagant price; but on the whole, it is perhaps better to give that price than injure the eyes and wear out the patience by burning tallow, or opake spermaceti, which often *runs*, as the term is, quite as bad as tallow.

The misery all around us, and the inability in some of our most respectable citizens, to pay the prices exacted in prosperous times, renders it necessary for them to unite in some plan by which a reduction in the prices of house articles, particularly of oil and candles, can be effected. House rent, pew rent, servant's wages, clerk's salaries, as well as all the common articles of clothing, are in a fair way of reduction, yet light, so necessary to the *thrift* of a family, is kept up at the old, high prices.

Mr. Judd has now grown rich through the patronage of a liberal public, and he will, no doubt, put down the prices of his beautiful candles to a sum within the reach of the honest industrious citizen, one who *intends* to pay for them. If *he* will do this, there can be no competition, for no one will purchase an opake spermaceti if he can get one that is indurated and clarified; not only having all this superiority, but giving a clearer light also.

A good clear light is indispensable to a reader; he can, by this means, do without spectacles at least two years longer than if he strained his eyes over a book with a dull candle, smoky, flickering and guttering, and calling off his attention every minute or two. Even with those elegant candles of Judd, some care must be bestowed, for a heavy black top-knot will form upon the end of the wick, and dim the light. Dr. Franklin discovered that if the wick of a candle was bent at an angle of 45, this black top-knot would never form, and the candle would never require snuffing. Many of his readers, to this day, pursue this method, and profit by it both in time and temper.

The rationale of this experiment is, that the end of the wick, being bent, projects outside of the flame, and the particles which have undergone combustion, drop off.

Whereas, if the wick stood *erect*, as the same combustion is going on as when *inclined*, the rejected particles lodge upon one another and form the top-knot. As Judd's candles have a plaited wick, it is not easy to bend them, but the candle itself, or what is better, the candlestick, can be tilted so as to make the wick protrude from the flame. It is well known that the two elements, fire and water, *when not impelled by force*, have but one course—fire or flame always *ascends* and water always *descends* perpendicularly to the horizon. The flame of a candle, therefore, let us tilt the candlestick as we may, will always be erect, and in consequence the candle will never want snuffing—it snuffs itself.

Instead, therefore, of listening to the crude notions of others, and the unphilosophical theory of the uselessness of spectacles, let a man get a pair the moment his eyes begin to smart a little at night, or feel fatigued, or when he has to interpose the candle between his eyes and the newspaper. If he is lucky enough to meet with a scientific, or at least a sensible vender of spectacles, he will get the *lowest* power at first, and after using them only at at *night*, (he will not require glasses in the *day* time for a year after he is necessitated to use them at night,) will get glasses *one* number higher, and take the *first* pair for his day reading. In this way, by using *two* pair, the weaker power in the day and the stronger at night, the eyes can be preserved to a good old age.

The great misfortune is that people use glasses of a high power at the very beginning. They go to the optician and select those which magnify very much. It is so pleasant to see the letters distinctly and clearly, that spectacles suited to aged eyes are selected by a man of fifty, and the consequence is, that when he arrives at three score and ten, he can find no glasses strong enough to suit him. Three score and ten, however, finds many a reader, and a great reader too, so that it is quite essential to be careful of our eyes when young. What would an aged man do if he could not read at night, and how perfectly miserable a reading man would be if he could not read in the *day* time.

As to being able to read without *spectacles* at the age of sixty—excepting in rare instances—it is absurd. There are many men in the city of New York, at this moment, of fifty and fifty-five, who have never had spectacles upon their nose, and yet their eyes have no better vision than those of that age who use glasses. Any one acquainted with the anatomy and physiology of the eye and the philosophy of vision, will smile at the ignorance of those who contend that it is the *use* of spectacles which injures vision, and that if the trial were made it would be found that a man who had never used them could read better at the age of sixty than he could if he had used them.

The superficial reasoners never take into consideration that the decay of vision, if so it may be termed, only keeps pace with the general decay of the whole system. They never consider that dogs—those that have humane masters, who let them live out their natural term—and cats, who are allowed to live out, or outlive, their '*nine* lives,' lose their eyesight as they grow old, just as human beings do. They do not lose their vision through local disease, but through the diminution of physical and vital energy, in common with animals of the higher order.

Wear spectacles, therefore, ye who depend upon books for the most agreeable solace of your lives; only use a good clear light, with a shade over your eyes, or over the candle, which shall throw the light on the book. Find out where the best optician lives and go there, even if you have to pay a few shillings more for them. Dr. ———, a distinguished oculist, *did* keep the best, and what was better, he knew what would best suit your vision; but alas, for us, he has, by his superior skill, grown rich enough to care nothing for the small profit on his glasses, so he *sells* them no more—he *gives* them, however, to his patients, and that is some consolation. We wish he could impart this branch of optical knowledge to others, we might again repair our vision at little cost and much profit.

Many of our best young men are thrown out of employment by the deranged, unsettled state of the times; let a number of them hire vacant patches of ground in the vicinity of cities, or even in the country where board is cheap, and cultivate the palma christi, or castor oil bean. The oil from this bean is going to be a great article, not only for medicine, but for *light*. It is ascertained that it can be deprived of all medicinal smell, and that it gives a beautiful, clear light for lamps, and what is better, that by adding an alkalescent ingredient, the most beautiful and transparent candles can be made of it, and at a price far cheaper than what is given for our common spermacetis. Lard, too, is now made limpid enough for the use of lamps.

This will bring candles *down* and young men *up*—this will be a *rational* '*flare up*,' and *reflect* more credit on those who engage in it, than to see them walking up and down Broadway with empty pockets and no honest means of filling them.

A gentleman in this city,—the relative of a physician lately deceased, wishes to dispose of a complete set of Johnson's Review from the year 1824 till 1835. We will cheerfully afford the requisite information to persons disposed to purchase.

Erratum.

Owing to an omission in the MS. of Dr. Archer's article, published last week, the following sentence was incorrect:—'It would be an anomaly in medical jurisprudence to allow the medical witness five *dollars*—the sum allowed to the Coroner, &c. It should have read 'five *times* the sum,' &c.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Aug. 13, 1842.

31 Men, 38 Women, 69 Boys, 85 Girls. Total, 223.

DISEASES.

Apoplexy	1	Intemperance	1
Asthma	1	Inflammation	3
Asphyxia	0	Of liver	1
Abscess	1	Of bladder	0
Aneurism	2	Of brain	5
Bleeding	2	Of stomach	4
Bleeding from stomach	0	Of throat	1
Bleeding from uterus	0	Of lungs	4
Burned or scalded	0	Of bowels	3
Casualties	0	Of womb	0
Cholera infantum	26	Of kidneys	1
Cholera morbus	3	Insanity	1
Congestion of the Brain	3	Jaundice	0
Consumption	23	Killed or murdered	0
Convulsions	5	Lues Venera	0
Croup or hives	3	Mortification	0
Debility	0	Malformation	0
Delirium tremens	1	Marasmus	8
Diabetes	0	Measles	0
Diarrhœa	5	Old age	3
Death from poison	0	Organic disease of heart	1
Dropsy	3	Palsy	1
Dropsy in head	11	Rupture	1
Dropsy in the chest	1	Rheumatism	0
Drowned	6	Spinal disease	0
Dysentery	13	Suicide	0
Erysipelas	0	Sprue	0
Epilepsy	0	Small-pox	2
Fever	3	Scrofula	2
Scarlet	3	Teething	7
Typhoid	4	Tumor	0
Puerperal	0	Unknown	2
Remittent	3	Ulceration of throat	1
Bilious	2	Ulcers	0
Inflammatory	1	Varioloid	0
Intermittent	0	Whooping cough	7
Fracture	1	Worms	1

John H. Griscom, City Inspector.

City Inspector's Office, Aug. 15, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, AUGUST 27, 1842. No. 9.

DO THE VARIOUS RACES OF MAN CONSTITUTE A SINGLE SPECIES?

BY SAMUEL FORRY, M. D., NEW YORK,

Author of 'The Climate of the United States,' &c. &c.

No. IV.

Lawrence maintains that the Negro has a moral and intellectual organization inferior to that of the white races, and that this is his 'natural destiny.' 'The retreating forehead and the depressed vertex of the dark varieties of man,' he says, 'make me strongly doubt whether they are susceptible of these high destinies;—whether they are capable of fathoming the depths of science; of understanding and appreciating the doctrines and mysteries of our religion.' In opposition to the opinion that a natural and *permanent* inferiority, compared with the white man, belongs, as a general attribute, to the Negro, Blumenbach and Prichard maintain that there is nothing in the organization of his brain which affords a presumption of inferior moral or intellectual endowments. Now, we think that we have already clearly shown that both these opinions are founded in error. That the Negro race is intellectually inferior, at the present day, to the European, is a position established beyond the shadow of a doubt; but that this inferiority, at least to the degree now existing, is a *permanent* law of nature, is not even probable. As regards the perceptive faculties, the Negro is evidently not inferior to the white man, but in the organs of reflection he evinces a decided inferiority. As respects, for example, what phrenologists designate as *time* and *tune*, the African, as a general rule, is superior to the European. To show that the native races of Africa are not mentally inferior to the rest of mankind, Prichard adduces the example of the woolly-haired Caffres of Southern Africa, who approximate to the European characteristics, whilst the tribes that we meet on approaching the intertropical region gradually present the peculiarities of genuine Negroes. He also thinks, in confirmation of the same position, that he has 'collected evidence sufficient to prove that the languages of many African nations, including particularly the Egyptian, the Caffre, and the Kongoese nations, belong to one department of human idioms.' And lastly, he believes the same opinion established by the relative capacity of the entire cavity of the cranium, as regards the Negro and the European, based on the measurements of Tiedemann, who shows satisfactorily that it is in no degree smaller than in other races. Now, it is truly extraordinary that a man of the intellectual acumen of Prichard, and with such a multitude of facts before him, should allow his judgment to be so greatly prejudiced by the preconceived opinions of earlier years. In the instance of the Southern Caffres, we see the depressed forehead of the uncultivated Negro rising into high and broad dimensions *pari passu* with civilization; and as respects the people of ancient Egypt, venerated even by antiquity as the birth-place of the arts and sciences, the same law doubtless obtains. That the mere relative capacity of European and Negro skulls, as determined by Tiedemann, (who weighed them when empty and when filled with millet seeds,) affords no criterion of the comparative degree of intellectual power, may now be regarded as an admitted truth. Surely no one who has kept pace with the progress of modern psychological science, will deny that the organs through which the nobler attributes of man act and manifest themselves, reside in the anterior portion of the brain; or that the superior development of this part,—a principle by which even the Grecian sculptor was guided,—is an index of those exalted prerogatives which elevate man above the brute. Assuming these as admitted truths, how absurd is the idea of taking simply the whole mass of brain as a standard of moral and intellectual power!

That the number and kind of psychological phenomena in different animals, have a close relation with the development of the brain, is not only evident from a comparison of the Negro and the European, but we also observe that the large cranium and high forehead of the ourang-outang elevate him above his brother monkeys. And this comparative relation between organization and mental power, (if we may apply this latter term to brutes,) may be traced, in the descending scale, through the monkey, dog, elephant, horse, etc.; thence to birds, reptiles, and fishes; and so on till we reach the last link at which the animal chain loses itself in the commencing degrees of the vegetable world.

Although, upon this point, the facial angle is not an exact test, yet it may be remarked that in the human race, it varies from 65° to 85°, the former being a near approach to the monkey species. Amongst the remains of Grecian art, we find this angle extended to 90° in the representation of poets, sages, legislators, etc., thus showing that the relation here referred to was not unknown to them, whilst at the same time the mouth, nose, jaws, and tongue, were contracted in size, as indicative of a noble and generous nature. That the development of the organs of taste and smell, is in an inverse ratio to that of the brain, and consequently to the degree of intelligence, is considered by Bichat as almost a rule in our organization. In the statues of their gods and heroes the Greeks gave a still greater exaggeration to the latter, and reduction to the former characteristics, thus extending the forehead over the face, so as to make a facial angle of 100°. It is this that gives to their statuary its high character of sublime beauty. Even among the vulgar, we find the idea of stupidity associated with an elongation of the snout.

It is further alleged by Prichard that the crania of Negroes found in European collections, are mostly unfavorable specimens, being the skulls of the most degraded tribes on the African coast, who have been kidnapped, or the skulls of the enslaved offspring of these unfortunate wretches. But this difference in the shape of skulls merely proves that the physical characters of the human family are not permanent. Thus the Mandingos, who are strictly Negroes, have shown themselves susceptible of civilization and mental culture; and as a consequence, we observe a correspondent change of cranial organization. This tribe and many others of Africa, are, at this day, much superior in civilization to the aborigines of Europe at the period which preceded the conquest of the Romans in the south of Europe, and of the Goths and Swedes in the northern parts. Living in the squalid sloth of a mere animal existence, our European progenitors might have continued thus for as many ages more, had not their conquerors from the East introduced the rudiments of mental culture—that impulse which has been found necessary to rouse a barbarous people from the slumber of ages. Can it be supposed that their European descendants have not changed in physical character—that the noble developments of the present races contrasted with the low forehead, diminutive stature, and deformed figure, of some of the northern hordes who overran Southern Europe, are not owing mainly to the influence of civilization and a more genial clime? And hence, too, there are incontrovertible reasons for doubting the truth of the universally admitted opinion, that human nature is the same in all ages and in all countries.

It is thus seen that the inhabitants of Europe, Asia, Africa, and America, present distinct and permanent features of character, which strongly indicate natural differences in their mental constitution. The inhabitants of Europe have, in all ages, evinced a strong tendency towards moral and intellectual improvement. The people of Asia early arrived at a certain degree of civilization, comparatively low in the scale, beyond which they have never passed. The history of Africa, if we except ancient Egypt, presents similar phenomena. And the aspect of America, with the exception of ancient Peru and Mexico, is still more deplorable. That there is a remarkable coincidence between the natural talents and dispositions of nations and the development of their brains, cannot be denied. And what object more replete with interest than an inquiry into the causes of this difference in national character, can be presented to the philosophic mind? If the causes are physical, do these differences originate in corporeal organization or in the influence of climate? Or are they the result solely of moral and political circumstances? That this subject has been investigated by philosophers in general, without any knowledge of the functions of different parts of the brain, is evident from the following extract from Dugald Stewart, who says that the favorite opinion with philosophers has been, 'that the capacities of the human mind have been, in all ages, the same; and that the diversity of phenomena, exhibited by our species, is the result merely of the different circumstances in which men are placed.' Now we think it may be set down as established truths; firstly, that the physical frame is not independent of external or even mental causes, and that the moral and intellectual phenomena of man are not independent of the former; and, secondly, that the key to a correct appreciation of the differences in the natural mental endowments of the various nations of the earth, is found in a knowledge of the size of the brain and the relative proportion of its different parts. As different mental faculties are manifested by different parts of the brain, it is necessary to judge of the size of these different parts in relation to each other. For example, the anterior lobe of the brain is the seat chiefly of the intellectual powers; the organs devoted to the moral and religious sentiments lie in the region of the crown of the head; and posterior to this is the seat of the animal propensities, and of the sentiments common to man and the lower animals. Among individuals and nations distinguished for great aggregate force of mind, moral, intellectual, and animal, we find large brains. It thus appears that mind dwells in a material tabernacle, and is acted upon by material causes.

There is great probability even that among neighboring nations, as, for example, between the German and French, distinct differences in the shape of the skull would be found to exist on minute inquiry. Thus it is well known that among the French the lower region of the forehead is large, whilst the upper parts are more prominent in the Germans; and hence, too, in conformity with the doctrine of the phrenological school, we find the latter characterized by a great development of the reflective faculties, whilst the former are more remarkable for the exercise of the observing organs.

Much attention has been given by Smith to the peculiarity of features observed in different nations, but many of his explanations will be deemed fanciful. Thus the elevation of the shoulders and the shortness of the neck in the Tartar race, are referred to the effects of extreme cold. As exposure to severe cold prompts involuntarily the raising of the shoulders in order to protect the neck, this cause, acting with the constancy inseparable from the frigid zone, from the tenderest period of infancy, when the features are most susceptible of impressions, affords, he thinks, an adequate explanation.

Reference may here be made, in a few words, to the effect produced by the climate of the United States upon its inhabitants of European, and more particularly of Anglican descent. The frame of the American is longer and leaner, at the same time that it is less compact and symmetrical, and the countenance does not exhibit so clear a red and white as the British or German—effects ascribable to the great extremes of the seasons. On the lowlands, more especially as the southern States are approached, the complexion has a tinge of sallowness, which contrasts strongly with the ruddy countenances of those that dwell in the parallel mountainous regions. In casting one's eye over our national legislature, the diversity of physiognomy, caused by endemic influences, is so obvious, that the general countenance of each State's delegation sometimes affords a pretty sure criterion to judge of its comparative salubrity.

That the civilization of countries is likewise greatly influenced by their physical features and by the relation of the interior to the coast, has been very correctly observed by Professor Ritter. As the Mediterranean coasts have been the great centres of early civilization, Europe has derived the greatest advantage in consequence of the easy communication with the interior by separating gulfs and inland seas. The continent of Africa, on the other hand, exhibits a compact and undivided form, thus cutting off the great regions of the interior by natural barriers from the same influence. It was in the river-system of Egypt alone that the progress of civilization was favored. Asia also contains vast interior spaces, individually distinct, each of which must depend for culture upon its own impulses. Europe and the greater part of Asia, however, are devoid of these insulated tracts, the inhabitants of which exhibit strongly marked peculiarities of physical character, which may be attributed to their subjection from immemorial ages to the influence of the same external agencies. Hence we find the most distant parts of Europe and Asia overspread by the same races of people, brought about chiefly by those repeated migrations of whole communities from one region to another, recorded in history, by which the social condition of entire nations has often been changed. In Italy we find geographical features which seem to have destined that country for the abode of a peculiar people, inasmuch as it is accessible on every side, and has a position which enabled it to partake, at an early period, of the advances of civilization made among the nations of the Mediterranean coast. In the land of Greece, we discover a similar combination of circumstances. But in which of its physical features are we to seek for the causes which produced in the Hellenic race the most perfect corporeal organization and the fullest development of the mental powers? Why was it that barren Attica effected almost superhuman achievements in sculpture and painting, rhetoric and oratory, and developed systems of philosophy that were taught in a language the most majestic, expressive, and eloquent of human idioms? An offset from the same stock from which arose the nations who spoke the Gothic, Celtic, Slavonic, Sanscrit, and Latin languages, is the superiority of the Greek, or are the differences among all these nations, to be ascribed to physical agencies? As the same nation subsequently sank, as though a period of growth, acmé, and decay, belong to races, the result shows that not only physical, but moral and political circumstances control the destinies of a people. But notwithstanding nations may degenerate, the qualities which distinguished them in their proudest state will still burst forth in glowing impulses. Italy, even in her degradation, can boast the immortal names of Dante and Petrarca, Tasso and Alfieri, Galileo and Torricelli, Raphael and Michael Angelo, and what a shining host of others!

It is, according to Malte-Brun, between the fortieth and sixtieth degrees of north latitude, that we find the nations most distinguished for knowledge and civilization, and the display of courage by sea and by land. This limitation, as a general law, no doubt well adapted to Europe, is inapplicable to the United States, inasmuch as the *isothermal* lines suffer great depression in the Atlantic region of North America. With us, then, the thirty-second and the forty-sixth parallels would form a correspondent boundary. It has been well remarked, that for a full mental and corporeal development, the due succession of the seasons is requisite. Those countries which have a marked spring, summer, autumn, and winter, are best adapted, by this agreeable and favorable vicissitude, for developing the most active powers of man. In countries which have no summer, the inhabitants are destitute of taste and genius; whilst, in the regions unfavored by winter, true valor, loyalty, and patriotism, are almost unknown. In surveying the different regions of the earth, as it were with a *coup d'œil*, the mental eye is equally struck with the dissemblances and analogies which appear. Each climatic zone has a peculiar aspect, the physical circumstances of which mould every thing with a plastic hand. Even man, endowed with those functions which constitute him a cosmopolite, becomes, in appropriating to his wants the objects which surround him, assimilated in nature. At the same time, it is equally apparent that political institutions and social organization often struggle successfully against climatic agency; for, heroes, men of genius, and philosophers, have arisen both in Egypt, under the tropic, and in Scandinavia, under the polar circle.

It is thus seen that the natural history of man presents a most extensive and complicated subject of investigation. Much research and erudition have been employed by anthropological writers to establish the unity of the human family; but as insuperable difficulties have been presented in tracing back the diverse varieties of mankind to the same single pair, some have cut the Gordian knot by calling in the aid of supernatural agency. Thus Morton, like others before him, thinks it 'consistent with the known government of the universe to suppose that the same omnipotence that created man, would adapt him at once to the physical, as well as to the moral circumstances, in which he was to dwell upon the earth.' Now this supposed miracle did not of course occur until the dispersion of Babel; and inasmuch as man is endowed with a pliability of functions, by which he is rendered a cosmopolite*—a faculty possessed in the highest degree by the inhabitants of the middle latitudes—there is not the slightest ground for the belief that it ever did occur, simply because no such special adaptation was demanded. Equally irrational is the opinion of Good, in his '*Book of Nature*,' that, like the 'otter-breed' of sheep in New England, 'from some primary accident resulted the peculiar shape of the head and face in most nations as well as most families.' Still more irrational are the conclusions of Lawrence:—'First, That the difference of physical organization and of *moral* and *intellectual qualities*, which characterize the several races of our species, are analogous in kind and degree to those which distinguish the *breeds of the domestic animals;* and must therefore be accounted for on the same principles. Second, That they are first produced, in both instances, as native or congenital varieties; and then transmitted to the offspring in hereditary succession.' The conclusion of Prichard that there is an intimate relation between the physical features of man and his moral and intellectual character, is indisputably founded in nature; but, wedded to the old opinion that the mind is a unit, he obstinately maintains, with Blumenbach, that there is nothing in the cerebral organization of the most barbarous Negro tribes, which indicates an inferiority of moral or intellectual endowments; and although he tells us that the most civilized Negro tribes have '*nearly European countenances and a corresponding configuration of the head*,' yet he cannot see that the intellectual superiority of an individual or a nation depends upon the development of the anterior portion of the brain.

As regards the long-continued discussion relative to Negro slavery, we thus perceive that both parties have contrived to be in the wrong. Constituting a single species, the European and the Negro, however unwelcome to the former, must necessarily trace back their origin to the same Adam. Although the Negro is not *originally* inferior, yet the abolitionists have erred in denying that he is *naturally* so at the present day, when compared with the Caucasian race. We must, therefore, admit the quaint but humane expression of the preacher, who styled the Negro, 'God's image, like ourselves, though carved in ebony.' Whilst this, however, is an error on the side of humanity, the advocates of the anti-christian practice of traffic in human flesh, have committed the moral mistake of perverting into a justification that which should constitute a claim upon those to whom nature has granted higher gifts. Instead of depressing more deeply into the abyss of barbarism those naturally low in the intellectual scale, the superior endowments of a more fortunate race should be exercised in extending the blessings of civilization. 'From him to whom much is given, much will be required.'

We shall conclude this article, which we have vainly endeavored to compress within more narrow limits, with some observations relative to the ancient inhabitants of our own continent. It is remarked by Morton, that 'the concurrent testimony of all travellers goes to prove that the native Americans are possessed of certain physical traits that serve to identify them in localities the most remote from each other; nor do they, as a general rule, assimilate less in their moral character and usages.' (p. 62) The ancient Peruvians and Mexicans, however, appear to have constituted an exception to this general resemblance; so much so, indeed, that they have been considered by some as a race of mortals *sui generis*. The arid region of Atacama, which was the favorite sepulchre of the Peruvian nations for successive ages, divides the kingdom of Peru from that of Chili, and is nearly one hundred leagues in length. 'In the midst of it,' says Herrera, 'is the River of Salt, the water whereof is so brackish that it presently grows thick in the hand or any vessel, and the banks are covered with salt.' As the climate, owing to the mixed sand and salt of the desert, tends rather to the desiccation than to the putrefaction of the dead, the lifeless bodies of whole generations of the ancient Peruvians, like those of the Theban catacombs, may at this day be examined.

From an examination of about one hundred of these crania, Morton arrives at the opinion, 'that Peru appears to have been at different times peopled by two nations of differently formed crania, one of which is perhaps extinct, or at least exists only as blended by adventitious circumstances, in various remote and scattered tribes of the present Indian race.' p. 97.

In physical appearance, these people do not appear to have differed from cognate nations, except in the conformation of the head, which is greatly elongated, with a very retreating forehead. Morton is decidedly of opinion that these skulls afford no evidence of mechanical compression, as they do not present the lateral expansion found among the tribes who have this artificial formation. Reasoning from the analogy of all other nations, it would be natural to infer that a people with heads so badly formed, if not distorted by art, would occupy the lowest point in the scale of intelligence. Such was not, however, the case with these people or the ancient Mexicans. Morton shows conclusively, 'that civilization existed in Peru anterior to the advent of the Incas, and that those anciently civilized people constituted the identical nation whose extraordinary skulls are the subject of the present inquiry.'

---

* It may perhaps with good reason be alleged, that man is more indebted for the boasted power of accommodating himself to all climates, to the ingenuity of his mind than to the pliability of his body; for, whilst inferior animals are naturally less defenceless against external agents, man, by the exercise of his natural endowments, can interpose a thousand barriers against the deleterious effects of climate. It is thus seen that he and other animals, in their terrestrial migrations, set out upon very unequal terms.

Mr. Pentland, an intelligent English traveller, who has recently visited the upper provinces of Peru, says that he, as quoted by Morton, 'discovered innumerable tombs, hundreds of which he entered and examined. These monuments are of a grand species of design and architecture, resembling Cyclopean remains, and not unworthy of the arts of ancient Greece or Rome. They, therefore, betokened a high degree of civilization; but the most extraordinary fact belonging to them is their invariably containing the mortal remains of a race of men, of all ages, from the earliest infancy to maturity and old age, the formation of whose crania seems to prove that they are an extinct race of natives who inhabited Upper Peru above one thousand years ago, and differing from any mortals now inhabiting our globe.' So greatly is the cranium distorted that 'two-thirds of the weight of the cerebral mass,' says Pentland, 'must have been deposited in this wonderfully elongated posterior chamber.' He adds the opinion that these extraordinary forms cannot 'be attributed to pressure, or any external force similar to that still employed by many American tribes;' and adduces, in confirmation of this view, the opinions of Gall, Cuvier, and other naturalists and anatomists.

The constructive talent of this people is also conspicuous in their roads, one of which is thus described by Humboldt, in his journey across the plains of Assuary:—'We were surprised to find in this place, and at heights which greatly surpass the top of the Peak of Teneriffe, the magnificent remains of a road constructed by the Incas of Peru. This causeway, lined with freestone, may be compared to the finest Roman roads I have seen in Italy, France, or Spain. It is perfectly straight, and keeps the same direction for six or eight thousand metres.'

Another writer, (*Long, Polynesian Nation*, p. 78,) remarks that 'at a time when a public highway was either a relic of Roman greatness, or a sort of nonentity in England, there were roads fifteen hundred miles in length in the empire of Peru. The feudal system was as firmly established in these transatlantic kingdoms as in France. The Peruvians were ignorant of the art of forming an arch, but they had constructed suspension bridges over frightful ravines; they had no implements of iron, but their forefathers could move blocks of stone as huge as the Sphinxes and Memnons of Egypt.'

In the ancient Mexican skulls, we behold a sugar-loaf formation, even more extraordinary, perhaps, than the Peruvian. Of the skulls examined by Morton, he says—'Not one of them is altered by art, and they present a striking resemblance, both in size and configuration, to the heads of the ancient Peruvians.'

As regards the degree of civilization of these Mexicans, when first known to the Spaniards, it has been justly remarked, that it was superior to that of the Spaniards themselves on their first intercourse with the Phenicians, or that of the Gauls when first known to the Greeks, or that of the Germans and Britons in their earliest communication with the Romans. They seemed to have a mental constitution adapted to scientific investigation.—Their knowledge of arithmetic and astronomy was both extensive and accurate. In architecture and sculpture they had made great advances. The remains of aqueducts and canals for irrigation yet exist. They knew how to extract metals from ores—how to form images of gold and silver, hollow within—how to cut the hardest precious stones with the greatest nicety—how to die cotton and wool, and to manufacture them into figured stuffs.

As the monuments of the Egyptians indicate a Caucasian formation of the skull—an inference confirmed by the positive evidence of their mummies, and as this connection between civilization and cranial organization holds good among all races now living, we cannot but regard the opinion of Morton and others, that the Peruvian and Mexican cranial configuration is natural, as contrary to a universal law of nature. Besides, there seems no necessity, simply because there are no lateral expansions, to resort to this conclusion, inasmuch as when the pressure is as great on the sides of the head as on the forehead, the skull must necessarily assume the cone shape. At the period of the Spanish invasion, the custom of moulding the cranium into artificial forms was quite common. Cieça, one of the oldest authorities, states that, 'in the province of Anzema, and that of Quinbaya, as well as in some other parts of this continent, when a child is born they fix its head in the shape they wish it to retain; thus, some have no occiput, others have the forehead depressed, and a third set have the whole head elongated. This conformation is, in the first place, produced by the application of small boards, and is subsequently continued by means of ligatures.'* As it is one of the human weaknesses, both in savage and civilized communities, for every one to admire his own national characteristics, so we find each evincing a disposition to exaggerate this peculiar feature by artificial means. Hence, whilst the Greeks in their Apollo increased the facial angle preternaturally, the naturally elongated head of the Mexican and Peruvian—a feature that was considered beautiful—was doubtless rendered more so, by the intervention of art, the compression being so applied as to prevent the lateral expansion.

As these ancient Peruvians do not differ in stature from the rest of mankind, reference may be here made to the general notion that the human family have undergone a physical as well as moral degeneracy since their first formation—a notion that was not less prevalent in ancient than in modern times. The frequent comparisons by Homer of the powerful heroes of the Trojan war, with his own degenerate contemporaries, are very disparaging to the latter. The assertion that men in general were taller in the earlier ages of the world than at the present time, is not sustained by proof. It finds no confirmation in the remains of human bones discovered in the most ancient burial-places, nor by any mummies ever brought to the light of day, nor by the sarcophagus of the great pyramid of Egypt. That civilization has been no cause of degeneration is obvious in every quarter of the globe—a truth that we can confirm from extensive personal knowledge in regard to our aborigines. On the contrary, in proportion to its advancement, does man improve morally and intellectually, and to some extent physically. The experiments of the voyager Peron with the *dynamometer*, showed that Frenchmen and Englishmen have a physical superiority compared with the natives of the southern hemisphere. But the same thing is established by a hundred historical facts. 'Bodily strength,' says Mr. Lawrence, very correctly, 'is a concomitant of good health, which is produced and supported by a regular supply of wholesome and nutritious food, and by active occupation. The industrious and well-fed middle classes of a civilized community, may reasonably be expected to surpass, in this endowment, the miserable savages, who are never well fed, and too frequently depressed by absolute want and all other privations.'

We have now passed under review the leading principles of the works, the titles of which head this article. Although our remarks have frequently not been in commendation, yet we take pleasure in bearing testimony to the great value of all these erudite researches. So well are these works, however, established in public estimation, that any praise from us were supererogatory. Like the ancient Egyptians, whose still existing monuments of the arts attest that their authors had the shape of head now called Caucasian, so do these literary monuments, of themselves, mark the heads of such men as Blumenbach, Prichard, Lawrence, Morton, and Smith, not only as belonging to the same race, but as laying claim to the ***beau ideal*** of cranial organization.

---

* Chronica del Peru, chap. xxvi., as quoted by Morton, p. 116.

REVIEW DEPARTMENT.

INFLUENCE OF MALARIA
UPON
PULMONARY DISEASES.

BY

HORACE GREEN, M. D., OF NEW YORK,

Late Professor of the Theory and Practice of Medicine in the Castleton Medical College.

TO THE EDITOR OF THE LANCET.

Sir:—In 1840, I communicated to the 'New York Journal of Medicine and Surgery,' some 'Observations on the Influence of Malarious Atmosphere in the prevention and cure of Phthisis Pulmonalis.'

This paper was published in the third number of the New York Journal, and soon after, it was reprinted in the Boston Medical and Surgical Journal.

My object in that communication, as you may see, by referring to the article, was to demonstrate, by facts and observations, the non-existence of pulmonary consumption in those localities in our country, where intermittent fevers prevail; and to show, that, while those places are exempt from the disease, the inhabitants of others in their immediate vicinity, but where marsh exhalations do not exist, are affected with pulmonary diseases to an unusual extent, although subjected to the same influences of climate, habits, temperature, &c. I, also, gave several cases which had come under my own observation, where persons presenting marked symptoms of tubercular phthisis had been restored to perfect health, apparently by residing in malarious districts; and added that, 'from these facts, and others of a like nature, which had fallen under my observation, I had been so well convinced of the incompatibility of consumption and intermittents, that, for several years I had been in the practice of advising my consumptive patients to visit places where an aguish atmosphere prevailed; and that, in many instances, the result had been decidedly beneficial.' I have since made further observations, and collected other facts, which go far to substantiate these same views. But, my principal object in this communication is to notice a work* which has recently been published in Paris, by M. Baudin, a physician of some eminence in the French army. M. Baudin, who has enjoyed, according to the British and Foreign Medical Review, in which his work is examined, 'many opportunities for observing the effects of marsh miasmata in several parts of France, Germany, Spain, Greece, and the Algerine districts of Africa,' has embodied in this work many important observations and facts, which go to establish the truth of this same doctrine; namely, 'the antagonism of the paludal poison to certain pathological conditions, and more especially to the tubercular diathesis.'

Among the many comfirmatory facts, which M. Baudin has adduced, are the following:—'The rarity of diseases of the chest, at Algiers, is such, that it has happened to me to visit many hundreds of fever patients without having occasion to practice in a single instance auscultation or percussion of the respiratory organs. Among a total of 12,853 patients, whom I have treated either in the army of Africa, or at the Lazaretto of Marseilles, (after their return from Africa,) I have met with only thirty-one cases of consumption, of whom twenty-five had incontestably been affected with tubercle before having embarked for the Morea or Algeria.' p. 72-5. 'But while consumption,' M. Baudin adds, 'is thus proved to be extremely rare in the essentially febriferous part of Algeria, the immunity from the tubercular diathesis appears to decrease in proportion as the country becomes more healthful in respect to the marsh diseases; so that a district often further south, but less marshy than the coast, predisposes so much the more to consumption the less it is subject to fevers.' This 'discovery' of M. Baudin having been brought before the 'Société Royale de Médecine de Marseille,' that learned body declared that, 'it is one of great importance, and our colleague has all the merit of it, for no one that we know of has made it before him.' Now, sir, if any merit in this matter, belongs to either of us, I shall lay claim to it, from *priority* of discovery, as my essay on this subject was published early in 1840, more than two year's before M. Baudin's work made its appearance; and, moreover, it will be seen from that communication, that I was in the practice, as early as 1830, 'of advising my consumptive patients to visit places where an aguish atmosphere prevailed.'

But neither to M. B. or to myself belongs the merit of discovery, so far as this matter is concerned; for, a knowledge of this exemption from pulmonary diseases of many parts of our country, where intermittents abound, and also of the fenny districts of England, has existed among the inhabitants of those regions for many years; and the attention of the profession has been called to this subject, from time to time, during the last thirty years, by writers who have remarked the phenomenon. Although, so far as I was acquainted, in this country, up to the period of the publication of my paper, the employment of miasmatic exhalations, as a *therapeutic agent*, in the treatment of pulmonary diseases, had not been recommended; nor had cases been given where its influence, in these affections, had been tested. Since the publication of that paper, however, I have received information from several physicians who have sent their consumptive patients into that part of our country where intermittents are rife, and who, after a time, have returned, restored to health, or greatly benefitted by the operation.

Yet, we need still further observations upon this subject. It is one well worthy of a thorough investigation. Pulmonary consumption is, of all other diseases, the 'opprobria medicarum' of the present day; and so long as one-fifth of the deaths in our country, as well as in almost all others, occur from this disease, it becomes the duty of every medical man to investigate this subject with an untiring assiduity until a remedy be discovered.

I am, sir,

Respectfully yours,

Horace Green, M. D.

77 White street, August 22d, 1842.

[We have consulted the Journal referred to by Dr. Green, and deem it but justice to that gentleman to quote the brief, but sufficiently intelligible record of the cases which suggested to his mind the idea respecting the influence of malaria in the prevention and cure of pulmonary disease. After a topographical description of Rutland in Vermont, and Whitehall in New York, twenty miles from the former, in both of which regions intermittents prevail, Dr. G. details his cases:—Ed. L.]

Case I.—A young lady, aged 16, had been laboring, for several months, under symptoms of incipient phthisis. She was hereditarily predisposed to the disease. Her mother and an elder sister had died of consumption; and several near relations on her father's side. The prominent symptoms were, a short, dry cough; pain in the left side;

---

* Traité des Fiévres Intermittent, Remittent, it Continués des Pays Chauds, et des Contrées Morécageuses, etc. Par J. C. M. Baudin. Paris, 1842. 8vo. pp. 336.

a burning in the palms of the hands—particularly at night; dyspnœa following the least exercise, lassitude, &c. Symptoms which were remarked by herself and the family as being the same with which her elder sister, who died, had been affected. With the other members of the family, medication had had, apparently, no salutary effect. Indeed, it seemed to have hurried them with greater rapidity to the grave. Under these circumstances, I advised her father to send her into the vicinity of the lakes, where she might be subjected to the influence of an *intermittent* atmosphere. For this purpose she spent the summer of 1831 in Whitehall. She had not been there many months before there was an evident improvement in her symptoms. Before the close of summer she had an attack of intermittent fever. It was slight,—having ceased after one or two paroxysms. Her improvement, after this, was rapid; and before winter, she returned to her father with restored health. She is now married to a gentleman in New York, and, up to the present time, has enjoyed uninterrupted health,

Case II.—Was that of a lady, aged about 30, who also had the hereditary taint. For several years she had been threatened with consumption; but, by care and prudent management, the disease, for a long time, was kept at bay. At length her symptoms became more alarming, being decidedly those which mark the incipient stage of phthisis pulmonalis. Aware of her danger, she was induced, in 1830, to take up her residence in one of the lake towns, where she could enjoy the benefit of an intermittent atmosphere. A few months after her removal to this place, I saw her, and found her restored to almost perfect health. She is still residing in that town, and in the enjoyment of good health, having had no return of her pulmonary affection.

The two following cases came under my observation in this city:—

Case III.—A young gentleman, about 24 years old, of a consumptive family, suffered severely from an attack of the influenza, which prevailed to some extent in New York, in the winter of 1837. He came under my care the latter part of that winter; at which time he exhibited the following symptoms:—A frequent, hard cough, unattended with much expectoration; constant pain in the chest; pulse 100; debility; loss of appetite; tongue coated; respiration a little accelerated; skin hot and dry, during the latter part of the day, with some perspiration at night.

The ordinary remedies were employed, which were followed with some abatement of the cough, and the pain in the chest.

On the 10th day after I first saw him he commenced expectorating blood, which continued several days. At the end of three weeks, his strength had improved and his cough had considerably abated; but as these primary symptoms of a pulmonary affection still remained in a great degree, I advised his leaving the city and seeking a more genial clime.

He went first to Ohio, where he remained several months; and from thence to Michigan, where, in the spring of 1838, he had an attack of intermittent fever. He returned to this city, about six months ago, in perfect health; not a vestige of that affection remaining, which he carried away with him.

Case IV.—Is that of my friend Dr. Z. H. Harris of this city, who has kindly furnished me with the facts in relation to it.

In November, 1836, Dr. H. caught a severe cold, which was followed by a cough, and, in a week or two, with an expectoration of purulent matter. His cough continuing about three weeks from the attack, hæmoptysis supervened, and this was followed, for some time, with a bloody expectoration.

These symptoms of phthisis becoming more alarming, as the winter advanced, he relinquished his practice and sailed for Mobile, early in January, 1838. So unfavorable did his symptoms appear, at this time, that one of the oldest and most experienced physicians of this city remarked to me, after taking leave of him, that 'the Doctor would never live to return to New York.'

On the 4th of February he arrived at Mobile, where he remained several months; but went to New Orleans the June following, and from thence to Indiana; where, in August of the same year, he had an attack of ague, which continued for some time. About eight months since, he returned to New York in confirmed health, and renewed his practice.

This very day, November the 20th, Dr. Harris visited me, at my office, in good health, and related to me the facts in his case.

I could enumerate other cases which have come under my own observation, but will only allude to one other, the history of which was communicated to me by my friend Dr. Woodward, formerly Professor of Surgery in the Vermont Academy of Medicine. Some time since, a young woman laboring under consumption,—apparently in its confirmed, secondary stage,—was brought to Castleton, the residence of Professor Woodward, to die among her friends. Her mother resided upon the borders of a small marshy lake, in the westerly part of the town,—a neighborhood where all new residents are sure to be affected with intermittent fever. Thither she was carried, and Dr. Woodward was called to attend upon her. He found her, as he informed me, exhibiting every symptom of ulcerated lungs. Indeed, so apparently hopeless was the case, that the medicines he prescribed were merely palliative; and he informed her friends that no permanent benefit could be expected, in her case, from the adoption of any means.

Several months after this, being in that neighborhood, he learned, with surprise, that his patient was recovering; and, on calling to see her, he, in fact, found her nearly restored. Her cough, and every other unfavorable symptom had left her. Her health since has been permanently established.

Dr. Woodward gave it as his opinion, that in this case—as well as in some other similar ones with which he has been familiar—the persons were restored to health by breathing an intermittent atmosphere.

[Dr. G.'s paper thus concludes:—]

If we examine into the past history of our own city, the same facts will be established. Cadwallader Colden, who wrote an account of the climate and diseases of New York, more than one hundred years ago, says, in speaking of the diseases of that day, 'we have few consumptions or diseases of the lungs. I never heard of a broken-winded horse in this country. People inclined to consumption in England, are often perfectly cured by our fine air.' It would seem that the climate, at this early period of our country, when the winters were long and intensely cold, would have been much better calculated to induce pulmonary affections than it is at the present day.

According to the testimony of the same writer, the winter then commenced about the middle of November, and continued severe until March. During this period the Hudson river was often 'frozen over at the town, where it is about two miles broad and the water very salt, so that people passed over upon the ice in crowds.'

At that time, and for many years subsequent to that period, New York was surrounded with lagoons, and marshy grounds, from whence, during the summer months, those malarious exhalations arose, which so often proved the exciting cause of 'intermitting fevers, cholera morbus, and fluxes,' which, as the above writer states, were the prevailing diseases of that day.

As improvements have progressed, these fenny grounds and stagnant waters have been drained off, the sunken places filled up, and intermittent fevers have as gradually declined. But with this declension of ague, phthisis pulmonalis has steadily and fearfully increased.

Dr. Morton, in his work on Pulmonary Consumption, observes :—'I am satisfied, however, that intermittent fever has not in this section of the country, proved a preventive against consumption. On the contrary, I have known persons whose constitutions were broken up by incessant attacks of ague and fever, to die of rapidly developed phthisis.' But it is not advocated that an attack of intermittent fever, like vaccina, will shield the system thereafter, from a more fatal disease. Had Dr. Morton witnessed, as I am confident I have, the salutary influence of a continued aguish atmosphere upon phthisical patients, he would have viewed its effects in a different light. I I have repeatedly seen symptoms of incipient pulmonary affections,—such as usually precede, and, in other cases when neglected, such as have ended in confirmed phthisis,—entirely eradicated by a removal to malarious districts; and that too, when the individuals have never suffered from an ague attack. It is not over medication that removes disease, but a judicious and prudent application of remedial agents.

This subject,—the influence of climate upon diseases,—especially the varied climate of our own country, has not, I am confident, received that attention from medical men which its importance demands. If, indeed, it be true, as some naturalists assert, that 'the infinite variety of form, color, constitution, and moral character, which the different nations, tribes, and races, present upon the surface of this globe, have been marked by the slow hand of time, through the instrumentality of climate,' what may not be expected from the same agent, in the cure of diseases, when the physical properties of climates, in their different localities, shall be thoroughly investigated, and their influence upon the human constitution, and their *modus operandi* upon diseases, shall be distinctly understood?

---

*On the Prevention and Management of Child-Bed Fever or Weed.** By William Kerr, Surgeon, Corresponding Member of the Medical and Physical Society of Calcutta.

In a recent number of that valuable periodical—the *Edinburgh Medical and Surgical Journal*—we find the very judicious essay whose title we have just given. Mr. Kerr's remarks are eminently practical, and will readily commend themselves to the attention of his readers. He says:—

Probably there is no disease which may in more instances be said to arise from ill-directed zeal for a patient's welfare than child-bed fever or weed, the following being by no means an unfrequent example of the manner in which a patient becomes ill, and is treated both by her unprofessional and professional attendants. A woman, some time after delivery, probably two or three days, or even a week, during a sleep perspires, and awakes chilly; she then pulls the bed-clothes more closely around her, and puts on another blanket to warm herself. For a short time, the uncomfortable sensations of cold are removed, but the perspiration continuing, they soon return with augmented severity. The patient is now sure that she has caught cold, and immediately adopts the necessary measures for removing it. Acting on this principle, she takes copious warm drinks to sweat it out, gets hot bottles to her feet, and a good fire in her apartment. Notwithstanding these vigorous measures for warming herself and expelling the cold, she soon feels that she cannot put her arms for the shortest period from beneath the bed-clothes without shivering; and if the same management be perseveringly pursued, in two or three days incoherence sometimes comes on,—always an omen of great danger,—and if the proper remedial measures be not adopted, the forerunner of death.

The whole of the treatment now described is founded on the supposition that the woman is cold, and is suffering from cold. Attentive observation, however, will lead to a very different conclusion. Almost as soon as a medical man has an opportunity of making an examination, the pulse will be found to be frequent, and will rise to 120 or upwards, as the disease, or rather as the improper management proceeds; likewise, if the temperature of the patient's skin be examined beneath the bed-clothes, it will be found to be considerably greater than natural, and during the prosecution of the supposed remedial measures, the patient, instead of finding that she is becoming more comfortable and returning to health, is getting rapidly more oppressed. The truth is, that the woman was too warm at the beginning, and has now, by erroneous treatment, been brought into a high fever. When she first awoke, perspiring and shivering, she was for the time overheated, and the shivering was merely the consequence of the dampness on the skin; a consequence which follows the cause more readily after delivery, than perhaps in any other state of body; the application of additional warmth temporarily removed the sensation of cold, but it produced more perspiration, and this again on the slightest exposure produced more shivering.* Death from weed is not exceedingly rare, but is generally attributed 'to the occurrence of a febrile disease resembling, though scarcely agreeing with typhus fever, a very unexpected and perplexing malady which was treated in the most prompt and energetic manner, and yet baffled every thing which could be devised.'

The plan of treatment which, for ten or twelve years, I have successfully pursued, is altogether the reverse of the preceding. After the birth of the child, and before leaving my patient, I instruct her to be very attentive to avoid getting overheated, and particularly to avoid perspiring. In the event of becoming rather warm and sweating, she is told to lessen the number of blankets, even though she should reduce these to a single one; and should any chilness be felt from evaporation of perspiration, she is instructed to take a quarter or half a wine glassful of any spirituous liquor, such as brandy or whiskey, either undiluted, or, if the patient cannot endure the pungency of the undiluted spirit, mixed with a very small quantity of cold water. Whenever chilness from sweating returns, the brandy or whiskey is to be repeated. The effect of the liquor is to remove the sensations of cold and the tendency to perspire. In present circumstances, cold spirits act very differently from warm toddy, the former drying up perspiration, and the latter increasing it. I have generally given brandy or whiskey in preference to wine, from a belief that the former are generally lighter on the stomach. The apartment, which ought not to be small, is at the same time to be kept properly ventilated and cool, the bed being so placed as not to be in a current of air.

---

* Called also Ephemeral Fever, that is, the fever of a day, an inaccurate appellation, this disease being of uncertain duration. I use the name Weed, for want of a better, to indicate that the disease under consideration is not the epidemic puerperal fever. In this essay, the term Child-Bed Fever is restricted to what is popularly called Weed.

* I have seen several instances of illness unconnected with the puerperal state protracted in delicate individuals by similar management.

In winter a small fire will generally be necessary to prevent the air from being uncomfortably cold. If a disposition to feverishness exist, all other drinks, as well as spirits, must be cool, at least not warm. These directions ought to be well explained, and the patient's attendants made to comprehend them before the practitioner leaves the house, because they are at variance with the plan which the patient and her friends will most probably adopt, if left to themselves, and if understood they will generally prevent the occurrence of child-bed fever. Too much care cannot be exercised to avoid this complaint; for when it does come on, even to a slight degree, such is the inability of the body in the puerperal state to resist injury, that the recovery will frequently be prolonged a week or two, or even longer. In pointing out the necessity of taking off bed-clothes, and otherwise cooling the patient when she sweats, and of giving a small quantity of spirits when she shivers, it is necessary to caution her that chilness may proceed from the temperature of the body being too low, which is recognized by the skin being perfectly dry; in this state she will require some increase of bed-clothes, and perhaps a piece of flannel wrapped around the legs. By this management, she never being overheated, nor suffering from cold, the recovery will generally go on without an untoward symptom, and much more freedom may be used in changing the body-clothes, and making the bed, than in cases where sweating is not strictly guarded against.

Besides observing the foregoing rules, there are several circumstances requiring attention, which are apt to excite feverishness, and hence with an improper regimen to produce or aggravate child-bed fever. These are constipation, after-pains, improper food, sitting up prematurely, and attempts to suckle their children on the part of delicate mothers who have scarcely any milk. If during labor the bowels are opened by an enema, a practice which should always be followed when time permits, on account of the diminution of oppression which it produces, even when the patient is unconscious of any sickness, and likewise on account of the pains after a thorough evacuation of the bowels being more effective, we need not feel any anxiety to open them again, till twenty-four hours after delivery, when a gentle purgative may be given. This having operated, the danger of feverishness coming on is much diminished; but during the whole confinement, after the first twenty-four hours, care must be taken to procure one easy evacuation daily. Sometimes exposure to cold, while the bowels are constipated, gives rise to a febrile indisposition, ushered, as in other fevers, by shivering without sweating. Attacks of this kind may occur for at least the first fortnight after delivery, and indicate that the bowels are not sufficiently open. The remedy is a laxative, and the skin being dry, spirits are not necessary. After-pains will of course require for their relief liberal doses of opium, aided perhaps by brandy. During the first four or five days, the food should be entirely farinaceous; afterwards a little chicken-soup may be permitted. Although by the third or fourth day some women are able, without injury, to be out of bed the greatest part of the day, yet, as a general rule, much suffering will be avoided by causing the bed to be kept for a week, more especially when the patient is not robust, or has had a severe labor. A woman of a feeble constitution ought to abandon the desire to suckle her child; if she makes the attempt early, pain in the breast is excited, feverishness comes on, and the secretion of milk ceases. In such cases a further inducement to employ a nurse is, that nothing so much insures the health and future strength of the child, as an abundant supply of nutritious milk, which can only be got from a robust woman.

In a great many instances child-bed fever arises merely from the patient perspiring soon after taking a drink rather warm, being too closely covered up with bed-clothes, or some other cause apparently trifling, the effect of which, if properly managed, would pass off without ever causing an indisposition, but in the way already pointed out goes on to produce a dangerous, or even fatal disease. When the patient and her attendants distinctly understand the management of sweating and shivering, the patient herself will often avoid danger by putting off a blanket when she feels rather warm, and may not require any spirituous liquor during her confinement. If, however, the overheating has produced sweating, and that again chilness, she may require a small quantity, such as a quarter or half-glassful of brandy, and very possibly no more may be necessary during her recovery. If, however, sweating and chilness return, they must be combated in the same way, a quarter or half-glassful of cold spirits being sufficient at any one time to remove chilness. As a general rule, robust and healthy women are least apt to perspire, and consequently least apt to shiver and require spirits; and delicate women, on the other hand, those who are most apt to be seized with weed. When sweating and shivering, notwithstanding all precautions, return frequently, as in delicate patients, I have met with cases in which a chopin or more of brandy was consumed before the woman had gained as much strength as completely to overcome the tendency to perspire. The febrile heat is not increased by spirits or wine judiciously given; exhaustion often to a very great degree has been produced by the previous sweating, and stimulants are required to restore the lost strength. As already mentioned, chilness and shivering may proceed from several causes. When they arise from sweating, by far the most common cause, they are to be removed by the use of spirits or wine; when they proceed from constipation, their removal should be attempted by a laxative, and when from cold, the skin being dry, by the administration of more coverings or gentle warmth.

When the patient has unfortunately got into a high fever, has a frequent pulse, and is incoherent, great circumspection and attention are requisite on the part of the practitioner. If lying in a small or heated apartment, she must be brought into one which is large, cool, and well ventilated. The bed-clothes must be regulated so as to allow her to cool; the extremities, if necessary, sponged with cool water, while spirits must be given so as to dry up sweating and remove chilness. In such a case as that now supposed, the debility great, with sweating and shivering recurring readily and frequently, brandy or whiskey requires to be administered freely. In this precarious state the fever generally produces an uneasy sleepless state, very prejudicial to recovery, which cannot be allayed by spirits alone, and requires opium in doses of about one grain once or twice a day. A moderately open state of the bowels is beneficial and necessary. If neglected, the fever increases, the belly becomes tumid, and the use of spirits is apt to aggravate the symptoms. As soon, therefore, as the strength is a little restored by other means, the bowels should be opened, if required, by an enema; but great caution must be exercised in this particular, for I have oftener than once seen irretrievable sinking of strength and death produced by the administration of a purgative, which unfortunately operated too freely.

Mr. Kerr then proceeds to narrate a melancholy case, illustrative of the danger of injudicious purgation. He next refers to the pernicious effects of the 'sweating process,' to which females were at one period so uniformly subjected during confinement. Our author here embraces the opportunity of referring, in condemnatory terms, to the recommendation given by Dr. Burns, to apply warmth in the cold stage of child-bed fever, in order to remove it, and also in the hot stage, for the purpose of shortening it. This mode of treatment does certainly indicate ignorance of any other mode of relieving chilness, than the application of warmth. This error being committed, there is no guide to point out the course to be pursued, and no consistency in the practice. Warmth is applied on account of sensations of chilness at a time when the patient is actually too warm,—the sweating which follows produces chilness again,—and more warmth is applied with the effect of renewing and increasing the evil. Mr. KERR's mode of treatment, as described in the extract we have given, is rational and appropriate.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, August 27, 1842.

We have, as our readers will perceive, given space in our present number, to a communication from Dr. GREEN, relative to the imagined beneficial effect of a malarious atmosphere in cases of tubercular consumption; but we are by no means disposed to agree with the writer. Such an opinion has been long entertained by some, but its fallacy is easily demonstrated. Dr. FORRY, in his excellent work on the climate of the United States, adverts to this subject, and states that he had long been convinced of the error of the opinion entertained by our correspondent, from having often witnessed in our Southern States, the supervention of rapid pulmonary consumption in constitutions deteriorated by malarial diseases; and having subsequently, when engaged in arranging the statistics of the United States Army, frequently met among the report of deaths from consumption, the remark that it followed an attack of remittent or intermittent fever, chronic diarrhœa, and other forms of malarial disease. 'In regard to this old opinion,' Dr. FORRY adds, 'Sir JAMES CLARK, in the last edition of his work on climate, says, that an attack of ague, is much more likely to favor the occurrence of consumption than to prevent it!' The succeeding remarks of Dr. FORRY, so fully express our own views, that we must quote them:—

> Whenever any cause depresses the vital energy and lowers the power of assimilation beyond a certain point, the tubercular diathesis will be produced. Moreover, the connection of pulmonary phthisis with congestion and derangement of the abdominal viscera, has been long since noticed; and as abdominal plethora is the predominant character of the prevailing diseases of tropical latitudes, we have a ready explanation of the high ratio of tubercular consumption in the West Indies. Hence, malaria has a tendency to develope this disease; for it tends to destroy the balance of the functions and diminish the tone of the system, thus robbing the blood of that rich fibrinous and vital condition, by which proper nutrition and the organic functions are sustained. Malaria holds a prominent place among the causes productive of the cachectic condition of the system which precedes the formation of tubercle; such as, unhealthy air, whether from closeness, humidity, or impurities,—long continued exposure to extremes of temperatures as connected with the seasons, or to cold alone as from insufficient clothing, in constitutions which have not vascular irritability enough to induce inflammation,—imperfect nutrition, whether from improper or deficient food, the abuse of spirituous liquors, or from lesions of the digestive or assimilative organs,—venereal excesses,—repeated courses of mercury,—profuse and very debilitating discharges, or their sudden suppression when habitual,—the depressing passions, as disappointed love, distress from reverses of fortune, etc.,—irregularities of the uterine function, especially when of a chlorotic character,—adynamic fevers, as well as the exanthematous forms when followed by the atonic state. In all these conditions of the system, resembling that induced by malaria, the impoverished blood, defective in that vital albumen with which the tissues, in the ceaseless change of the human organization, are constantly renovated, deposits in its stead a degraded matter, imperfectly or not at all organizable, called *tubercle;* and this deposition naturally takes place in those organs whose textures are in closest relation with the blood.

The manner in which Dr. GREEN draws his inference from the two or three cases related by him, savors too much of the *post hoc, ergo post propter hoc.*

The able article of our esteemed friend Dr. FORRY, on the Varieties of the Human Race, is concluded in our present number. Our readers will, we are sure, agree with us that the paper is highly creditable to its erudite and talented author. We should mention that the article first appeared in the *Democratic Review*—a journal which appears to increase rapidly in value and importance. The more frequent appearance, in our literary periodicals, of scientific papers, written in a popular style, is greatly to be desired. If instead of paying for trashy love-stories, and often, still trashier political disquisitions, the proprietors of these journals would occasionally enlist the services of scientific writers, *and pay them decently,* they would greatly benefit the community,—and what is (of course) far more important,—advance their own interests.

We extract the following amusing sentences from the last number of the *Western Journal of Medicine and Surgery:*—

> The rage (if such there be) for hebdomadals, will be short-lived, and work its own cure, to which nothing will tend more promptly or effectually than their multiplication. We do not deny them a measure of utility; they quickly disseminate a knowledge of the *novelties* occurring in the profession, in which respect they are attractive and peradventure useful; but from their very constitution they can do little more. For solid learning, for extensive research, for all, in short, that can give character and dignity to the profession, that will set its members to thinking and reflecting, and result in permanent improvement, a monthly or quarterly will be required.

A most extraordinary paragraph! We don't know which most to admire—its modesty,—its good sense,—or its consistency. Firstly, the writer deplores the inerease of weekly medical periodicals, and desires their annihilation; secondly, he somewhat relents in his feelings towards them, and declares them to be attractive and useful; but, thirdly, he has not yet done with them, for, he affirms that in 'all that can give character and dignity to the profession, they are wanting!' We have no means of ascertaining the moon's age, when this sensible and consistent paragraph was indited, but we must confess that it does afford some evidence of the influence of that queenly orb, who, as it is credibly affirmed—

> 'O'er moist and crazy brains,
> In high spring-tides, at midnight reigns!'

Exposition of the Conduct and Character of Dr. John Augustine Smith, President of the College of Physicians and Surgeons in the City of New York, and Professor of Physiology; as exhibited in the Session of 1839—40. By James R. Manley, M. D., late Lecturer on Obstetrics. New York: 1842. 8vo. pp. 48.

A most refreshing pamphlet! In the dull quiet of these languid days, it comes with its pleasantly exciting contents, welcome as ever was glass of Ennishowen to the throat of a thirsty Irishman, after weary travel over a sun-burnt bog! It was, we well knew, impossible for Dr. Manley to be dull; but really, we scarcely anticipated such proof, that 'age cannot wither, nor custom stale,' the freshness and piquancy of his wit and sarcasm. This curious 'Exposition' will make a sensation. It will.

It is true that the great and evident aim of these forty-eight pages, is to avenge a personal quarrel, and exhibit the author's opinion of the moral and mental character of his adversary; yet, the production is not without its reasonable claims, on the attentive examination of the thoughtful student of human nature. In the squabbles of this little circle of professional men, we can witness with wondrous minuteness, the workings of the same passions, the same envyings, and jealousies, and strifes, and intrigues, and double-dealings, the same degrading selfishness, the same malevolence, with which, on the great theatre of the world, the better principles of humanity daily wage perilous, and alas! too often, unsuccessful war, and by which the general heart of man is so torn and riven. Let us then, as a moralist would inspect an ant-hill, examine for a little the subject matter of this curious pamphlet—let us observe the heroes, and how they bear themselves. And

> 'First, declare, O Muse, in what ill-fated hour,
> Sprung the fierce strife, from what offended power?'

The following recapitulation of the offences of Dr. Smith, answers this question—the lectureship of Obstetrics was the one in question:—

> 1. I was invited to become the lecturer, and never asked a vote. 2. I was before the public one month before appointment, and although Dr. Smith was opposed, and sent me word that I could not be appointed, I *was* appointed. 3. I accepted and conducted the course with satisfaction; he determined to ruin me, and in the middle of the course denounced me as incompetent without a single fact, and *he had never heard me.* 4. He begged professors, collectively and individually, for an opinion against me, and all refused it. 5. I appealed to my class, they all (fifty-eight) supported me. 6. He called a meeting of the trustees before the course was ended, and had every one there, twenty-one besides himself, and defeated my recommendation by one vote; then went into a ballot for lecturer (one month before the last examination) to supply the place; the Regents being (though constantly meeting) kept ignorant of the necessity of such a measure.

We know nothing of all this beyond the statement before us. But Dr. Manley, we know, is not the first who has been made the victim of that sort of manœuvring selfishness and low ambition, which works in the dark, and finds in holes, a congenial home, wherein to nourish its venom and bloat its deformities! How many of those who pretend to lead the profession, go about privately blasting each other's fame, and in secret, breathing forth malice against enemies and rivals, whom they dare not meet in the open day! Oh! how many noble, struggling spirits have thus been assassinated by bloated pomposity and successful ignorance!

But here is a sample of Dr. Manley's descriptive powers; he is speaking of the course of lectures on Physiology at the Crosby-street School:—

> With the exception of three or four lectures on abstract and abstruse subjects, of little importance whether understood or not, the whole course is a meagre syllabus of exploded doctrines, which have been so long known as to have been forgotten. The four important subjects of Respiration, Circulation, Digestion, and Secretion, are disposed of as if they were of infinitely less account than the anecdotes to which they give occasion; and the time occupied in serious discussion of physiological truths is as nothing compared with that which is spent in relating pleasant stories. How much truth, for example, would be required to neutralize facts like these? 'That whales are fat, because they live in cold latitudes'—'that nature's laws of compensation, in the absence of fat, provide abundance of hair, and that, therefore, the Russians starve their hogs that they may bear good crops of bristles'—'that certain animals possess the love of sentiment as well as the instinct of the sexes'—'that in some, the hog for example, the male has its seasons, but the female has not'—all which interesting truths, aside from their importance, are as well settled, as that the most meagre sheep always has the best fleece!

We cannot find space just now to present an analysis of this *exposé*. Next week we may quote some of the strange revelations with which it furnishes us. The following most judicious remarks on a defect in the organization not only of our College of Physicians and Surgeons, but of many kindred institutions, struck us so forcibly that we must give them now:—

> It was a great mistake to place the government of this medical school in the hands of persons, who by the necessity of the case are no judges of medical acquirements. [About one half of the board of trustees are merchants or men who profess no knowledge of medical subjects.] It was a still greater one, when, as if to render even this organization nugatory, the Regents of the University appointed Dr. Smith, who is a professor, also its president;

thus making him the channel of communication between the boards of professors and trustees, he holding the one office by appointment, and assuming the other, claiming to preside over both. All communications between these bodies must now be held through an interested agent, who is more intent on preserving his own situation in despite of his acknowledged incompetency, than in protecting and cherishing the interests of the institution. It is this vice in the organization of the college, which furnished him with an excuse for his conduct towards me; when he told his class that he held *two offices*—one as president, the other as professor; and that he acted in his character of president, when he denounced my course of instruction.

The propriety of these strictures must be admitted. Here is another passage, which we must also give, for it exhibits in glaring characters, the MORAL of the whole pamphlet—a moral which can never be too forcibly impressed:—

> It need not be disguised, that the practice of physic has within a few years, lost much of the respect which it formerly enjoyed; and to nothing is this more justly attributable, than to the mercenary spirit, which the public think (wrong or right) pervades the medical profession. Medicine practised as a trade is certainly as discreditable as it is dangerous, and if the scandal attaches, the odium is merited: whether it does or does not, every intelligent man must answer for himself; but of one thing we may be assured, if it does not, it soon will; since nothing is better calculated to produce this result, than the conversion of the business of teaching it, into one merely of profit. In many parts of this country it has become a profession by itself, and teachers travel from place to place to instruct, who have no experience to illustrate or confirm their lessons. At the present time, the labor-saving process of lecturing is more in request than at any former period, simply because it is easier to listen than to read; and when the lecturer looks only to be compensated in coin, it is obviously his interest to make his lectures popular, and there is great danger that instruction may be sacrificed to mere amusement.

To this high-toned and earnest vindication of medical science, and medical teaching, the following sentence, from a letter written to the author, by Dr. GILMAN, before his election to the Chair of Obstetrics, furnishes a most expressive appendix:—

> '*To me, as you are aware, the sanction which such an appointment gives to a young man's professional character, is of almost infinite value.*'

Thus, alas! it is. The solemn responsibilities and elevated duties of a public teacher, are utterly lost sight of, and that office sought merely because it will be a stable stepping stone to practise and money! How in our soul we despise the conduct of the men, who can thus traffic in the sacred interests of science and of our youth, and prostitute a noble calling for the sake of filthy lucre! 'O my soul, come thou not into their secret; unto their assembly, mine honor, be not thou united!'

A Treatise on the Diseases of the Heart and Great Vessels, and on the affections which may be mistaken for them: Comprising the Author's view of the Physiology of the Heart's action and sounds, as demonstrated by his experiments on the motions and sounds in 1830, *and on the sounds in* 1834–5. By J. HOPE, M. D., F. R. S., &c. &c. &c. First American from the Third London Edition. With Notes and a detail of recent Experiments, by C. W. PENNOCK, M. D., Attending Physician to the Philadelphia Hospital, Blockely. Philadelphia: Haswell & Johnson, Ninth and Chestnut streets. 1842. 8vo. pp. 572. [With Plates.]

We are sure that the profession in this country, will consider itself indebted to the enterprising publishers, for this excellent edition of this standard work. The high estimation in which Dr. HOPE's treatise is held, is fully demonstrated by the fact that six or seven new editions and translations of it, have been sold in as many years. The present edition contains a considerable amount of new and valuable matter from the pen of the author, whilst the numerous notes of the Editor are judicious and interesting; and the volume is thus endowed with no inconsiderable claims on the attention even of those who possess any of the former editions of the work. We trust there is no necessity for impressing on such of our readers, as have not studied the work, the importance of immediately procuring a copy. We have pleasure in remarking that the plates are executed with accurary and beauty.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Aperture in the Iris.

BY MIDDLETON GOLDSMITH, M. D.,

Prosector of Surgery, College of Physicians and Surgeons, New York.

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

James Christie, æt. 27, a native of Ireland, laborer—dark hair—clear dark skin—constitution originally good—father and mother both living—applied January 4th, 1841. He complains of pains in the shafts of his long bones, especially on the approach of stormy weather. The pains are worse in the latter part of the night. Had a chancre and bubo three years ago; the disease continued about six weeks, and he recovered, as he says, without the use of mercury. About two years ago he was seized by an intermittent, which lasted for eighteen months, or until four months ago. A short time after the supervention of the fever and ague, the pains of which he now complains first began, and have continued ever since. About a year ago his throat became sore, and has continued so until the present period, though during that time it has been so mild as scarcely to deserve consideration. Eighteen months ago, according to his account, he was attacked by an inflammation of the right eye, accompanied with stinging pain in the globe, a dull heavy pain around the brow and temple, with great sensibility to light. During the progress of this disease exposure to the sun would produce the sensation of vivid flashes of light. At the end of seven weeks he had lost the sight of that eye. While these changes were taking place in the right eye, the same disease, though in a milder form, developed itself in the left. They now present the following appearances:—The conjunctiva in both is dusky and dull; zonula iritica visible, but not plain; in the right, the pupil is irregular and nearly closed; the iris adheres to the crystalline capsule; in the left, the pupil is small; but in the iris, externally and extending a little below a horizontal line, is a large opening with an irregular edge. A strip of the iris divides this aperture from the pupil, and another strip is visible at its ciliary margin. In this eye, too, the iris evidently adheres to the capsule. Both irides are hazy, and have an oscillating motion easily seen at every movement of the eye. The humors are clear and healthy looking; the globes feel firm under the finger, and there is no evidence of dissolution of the vitreous humor. In the *right* eye the flashes of light were much more frequent and severe until the sight grew dim. The patient can see with the left to go about the streets; but all objects appear confusedly double—or rather, each half of the body seen swells out, while the line of junction is indistinct, and vision is rendered still more indistinct by the presence of fixed dark spots and floating lines of *beads*. He complains of a pain in the back of his head, which is increased by coughing. Coughs at night. Bowels open—tongue clean—appetite good—pulse easy, but feeble.

℞ Iodid: Potassi: ʒij.
Aqua font: ʒviii.
M. A table-spoonful three times a day.

℞ Rad: Sarsæ: ʒvi.
Cort: Cinchon: ʒij.
M. Add two quarts of boiling water, and when cool take a wine-glassful three times a day.

January 10th.—Pain in the head somewhat diminished; less pain at night; pulse stronger; eyes remain the same. Continue.

℞ Deut: Iodid: Hydr: gr. xv.
Adipis Suillæ, ʒiij.
M. To be rubbed on the temples till the production of pimples.

13th.—The pains have ceased; begins to see with the right eye; left eye improving. The sclerotica conjunctiva is clearing up, and presents less of the dusky red. Continue.

20th.—The pain in the back of the head sometimes returns and stays for a moment. He begins to distinguish colors with the right eye, and the left is improving more rapidly. The iritic zones are clearing up. Continue.

The remainder of the treatment in this case was but a continuation of that already mentioned. Vision went on improving, until the man was able to read ordinary print without much difficulty, and when discharged his cough and rheumatic pains had entirely left him. The opening of course remains the same.

There are several points of interest in this case:—

In the first place, the length of time elapsing from the date of the chancre to the supervention of the iritis, for it was evidently syphilitic. It must be borne in mind here, however, that the man may have had a chancre at a more recent period, and yet would not own it.

Secondly. The presence of an aperture in the iris, without an injury, or its adhesion to the cornea. I know of no other way of explaining its occurrence than by referring it to the process of ulceration.

Thirdly. The complete loss of sight in the right eye, where there was less apparent organic lesion, and its return at the cessation of the iritic inflammation.

In the fourth place—the oscillatory motion of the irides, when there was evidently no dissolution of the vitreous humor. This must be referred to the fact that they both adhered respectively to the crystalline capsules, and through them followed the motions of the lenses. I have now under treatment a case of cataract, in which this same phenomenon is observable. In this case too, the iris adheres to the capsule. As showing that the lens really has this motion, I might here refer to the case of a lady who has a dark spot on the lens of one eye, and she is aware of this kind of motion in throwing the eye suddenly upon any point.

In the fifth—it is interesting to remark the effect of the iodide of posassium. The *quo modo* must be left to those who are fond of speculation. I might state in this context, that I have since used the same medicine in a case of chronic syphilitic iritis, attended by dimness of vision and nocturnal pain, with similar good effect.

I regret, in reporting this case, to have trespassed so largely upon your columns; but it seems to me (for I have as yet found no parallel) to be somewhat rare, and at least deserving of a passing notice. In the hope that it may prove as interesting to your readers as it has been instructive to me,

I remain, my dear sir,
Yours, &c.
M. Goldsmith, M. D.

12 *Walker street, N. Y., Aug. 23d*, 1842.

Case of Cancrum Oris successfully treated.

TO THE EDITOR OF THE LANCET.

March 5th, 1842, was called in to visit E. P., female, æt. 8—strumous diathesis—dark hair and eyes—lymphatic temperament—as Graves would say, 'the white tissues predominating.' Found her laboring under a severe form of pneumonia. By the exhibition of the several remedies, though not very severely antiphlogistic, she recovered, and I dismissed her as fully convalescent on the 14th of the month, or ninth day from the attack. On the 23d of the same month, I was called to her again; found her laboring under epistaxis; the bleeding had commenced forty-eight hours previous to my being called; at times it partially subsided. When I saw her the pulse were 100, not feeble. Her parents thought she had lost near a pint of blood. She presented no unusual appearance; appetite good; no febrile excitement. Filled the nares with cotton, wet in a strong solution of acetas plumbi; applied cold about head and neck; cathartic sal. eps.

27th.—Was again called. At times, since last visit, had been some oozing of blood; to-day there seemed to be a gush from the mouth. Upon examination, found some coagula lying between the lips and gums; the lips covered with black sordes, and sphacelation seemed to have commenced. There was a distinct line of demarcation between the healthy and unhealthy parts; tongue had two large patches upon it of the same dark color. The face, body, and limbs, covered with dark red and livid petechia; pulse 120 and feeble; countenance appeared exsanguine. There had at this time been no washes or gargles used that could color the tongue and lips.

℞ Nit: Argent: gr. xx.
Aquæ, ʒii.
Fiat solutio.

Use as a wash about the lips and mouth; if hæmorrhage reappears, gargle with a strong decoction of white-oak bark.

℞ Cort: Cincho: Rad: Serp: āā. ʒss.
Aq: bullient: ʒvi.
A teaspoonful every four hours.

28th.—Some hæmorrhage since last visit; was readily checked by the gargle of oak bark; is now a constant discharge of saliva tinged with blood; general appearance of patient about the same. By advice of Dr. Hatwell, of Southbridge, continued prescriptions of yesterday.

℞ Tinct: Kino, 2 parts.
Elix: Vit: 1 part.

Dose 20 drops, alternating with the castor oil and turpentine, for a cathartic, as occasion requires. Nutritious diet.

29th.—General appearance much the same; some ill-conditioned ulcers broke out upon face; oozing of bloody serum from left ear. To cleanse sores,

℞ Tinct: Kino, Bals: Copaib:
Ol: Terebinth: equal parts.

Continue the same prescriptions.

31st.—More feeble, though no hæmorrhage since last visit; pulse more rapid and feeble; petechia less vivid; some restlessness the preceding night, though no complaint of pain. Continued same prescriptions, with addition of anodyne draughts at evening.

April 2d.—Petechia disappearing; sores upon face healing; pulse 120. Slept well after taking anodyne draught. From this time forward there was a constant and rapid improvement. By April 9th, the petechia had disappeared; tongue clean; lips were excoriated, but healing kindly; appetite improving; rest well, &c.

12th.—Dismissed her as cured.

I am yours, with respect,

Wm. S. Sanders, M. D.

Storrbridge, Mass., August 1st, 1842.

On Adhesions and Strictures in the Vagina during Pregnancy and Labor.

BY DR. DOHERTY, OF DUBLIN.

[In the sixteenth volume of the Dublin Medical Journal, this subject is treated, by Dr. Kennedy, as it is found to exist in the unimpregnated female; and Dr. Doherty, in a clever paper in a more recent number of the same Journal, treats of the affection as it occurs in the impregnated female. Adhesions and strictures of the vagina may no doubt frequently exist in the virgin subject, as well as in one who has been previously impregnated and undergone parturition. When it occurs in the latter subject, it will generally be the result of pressure or injury during labor. The walls of the vagina may become glued together either at one point or throughout the whole surface, or bridles of lymph may be found in different parts. The formation of these cicatrices somewhat resembles the same process from burns.

'The most usual complication is a falciform band encroaching on the area of the vagina, or one or more rings of cartilaginous hardness, either traversing its whole circumference, or only contracting a segment of it: and with these there is too frequently found a vesical fistula.' If the constriction is slight, it will not be necessary for the practitioner to interfere much during labor.

The relaxation of the parts will almost invariably be sufficiently accomplished by the judicious use of tartar emetic, given in nauseating doses. In most instances, this practice will entirely supersede the use of the lancet. Cases of the greatest rigidity, almost resembling a 'cylinder of iron' round the finger, have been relaxed by this medicine in less than six hours. Sometimes, however, a perfect occlusion exists, and in this case we must have recourse to an operation, which must at all times be dangerous on account of the proximity of the bladder on one side and the rectum on the other.]

'The best instrument,' says Dr. Doherty, 'which we can employ, is a straight bistoury, covered throughout with sticking plaster, except over a small portion of its extent. It can be safely introduced by carrying its flat surface along the finger, passed into the vagina. In making our incisions we should never allow them to go beyond the sixteenth of an inch in depth at once, and we should frequently withdraw the knife and make a careful examination of the progress we have made. A pair of flat wooden spatulas, introduced one on either side, will by keeping the parts asunder, facilitate the operation. It will also be found a useful precaution to pass the finger of the left hand up the rectum, in order that we may judge how far our incisions may be carried without endangering that intestine; and it is a matter of prudence to avoid, as much as possible, cutting towards the bladder, lest from its close proximity and intimate connection with the vagina we open into its cavity. Having thus, step by step, and with the utmost circumspection, separated the adhesions as far as we think prudent, we should wait until the opening has had an opportunity of dilating under the pressure of the presenting part, when, if the head be still prevented from descending, we may endeavor, in the same cautious manner, to enlarge the canal a little more.'—*Dub. Jour. of Med. Science.*

[The next question is, how long are we to wait before operating, when only a severe constriction exists, and when the child's head must of necessity tear through the parts, if those parts are not artificially liberated.

We must remember that in all severe constrictions of the vagina, its parietes are not the only parts implicated. The neighboring viscera will frequently too be adherent, and therefore any laceration of the vagina will also lacerate those viscera: hence the necessity of timely interference with the knife or other instrument when we feel convinced that the head will not pass without this. The constriction should therefore be nicked in two or three places, the incisions never exceeding the sixteenth part of an inch in depth, and being directed laterally or backwards rather than forwards, and the finger of the left hand at the same time being kept in the rectum as a guide. Dr. Rigby recommends that this should be done during a pain when the patient will probably be unconscious of the act; but the correctness of this practice is certainly questionable, as few patients can be sufficiently quiet on such an occasion for the surgeon to be particular in the depth and extent of his incisions: and moreover the incisions might be very suddenly enlarged if made during a pain. On all these occasions we are not warranted in resorting to an operation till we feel convinced that relaxation of the parts has been carried to the utmost, and that any further delay might produce laceration.]—*Braithwaite's Retrospect.*

New Researches on Diabetes Mellitus.

BY M. A. BOUCHARDAT.

[Some time ago, M. Bouchardat published a memoir in which he attempted to show, that the existence of saccharine urine in diabetes mellitus has some remarkable connection with the ingestion of feculent aliment, such as common bread, &c. In his treatment of such cases, therefore, he strongly insists on the almost total abstinence on the part of the patient, of all such articles of diet. The patient must, in the first place, abstain voluntarily and continuously, from the use of common bread. He says that two objects are to be principally kept in view in the treatment; viz.]

1st. To discover an aliment which would replace bread without producing its ill effects in diabetes.

2d. To restore the economy to its natural condition, profiting by the interesting experiments of the commission on gelatine, respecting the essentially nutritious properties of gluten. It immediately occurred to me (says M. Bouchardat) to prepare with this substance, an aliment which might be used in lieu of bread. The difficulty of preparing gluten for daily use was an obstacle in the way, but it occurred to me that the Société d'Encouragement had granted a prize to M. E. Martin for having isolated gluten during the preparation of starch. I therefore applied to this eminent manufacturer, who zealously entered into my views, but notwithstanding all his efforts, it was always necessary to add a fifth part of fecula to obtain a light bread, and of an agreeable taste. The result, though not perfect, is yet a great improvement, for two hundred grammes of this bread, with a sufficient allowance of fresh meat, would constitute a sufficient diet, and a quantity of fecula ingested daily, would amount to but fifty-five grammes.

The question of restoring the economy to its natural condition was a much more difficult one, for its solution required either one of those happy inspirations which are so rare, or an exact knowledge of the nature of the dis-case. In this case such a knowledge would suffice, as diabetes is not a malady connected with irreparable structural lesions; no organ essential to life is primitively affected. It is an aberration, but a rebellious aberration of the functions. Organic lesions, as pulmonary tubercles, for example, are secondary. The primitive affection should be curable, and if it has not been so hitherto, the reason is that the true cause of the disease has escaped our investigation.

The following were the considerations which guided me. The acid secretion of the skin is suddenly and completely interrupted in diabetes; and here is one decided cause of disturbance; the secretions of the mucous membrane, and of the glands of the digestive organs are altered in their chemical composition; as a consequence of this suppression of the cutaneous exhalation, they become almost completely acid in lieu of being alkaline.

Can we thence conclude that the superabundant acids in the digestive organs react on the fecula and change it into sugar? Certainly not, for I have long since ascertained that mineral or organic acids have no influence in converting fecula into sugar at the temperature at which digestion is effected. We must, however, bear in mind, that whenever the organic acids exist in considerable quantity, we simultaneously encounter that modification of albumen which acts in converting fecula into sugar; this occurs in the ripening of fruits. The same coincidence probably occurs in diabetes, and the origin of the disease is the suppression of perspiration, and the perversion of the secretions of the mucous membrane, and glands of the digestive organs.

If this hypothesis be admitted, and observation and experience have clearly proved to me the reality of this perversion of secretion, the rational indication of treatment should be directed towards re-establishing the functions of the skin. I know that many fruitless attempts have been made in this direction. Thus, vapor baths have been recommended by Oribasius, Bardsley, and many others, but I have never seen any evident benefit follow their use. The same is true with respect to sulphur baths, the hydro-sulphuret of ammonia, &c.

The means which have seemed to me most effectual in restoring the functions of the skin, are, 1st. Woollen clothing, in quantity sufficient to keep up constant diaphoresis. 2d. The internal administration of ammonia and opium.

[Some cases are related, of which the following is one.]

M. A., in the vigor of life, for about six months has suffered from extreme thirst, has passed much urine, and has sustained a daily diminution of flesh, strength and energy. His sight has also deteriorated rapidly.

16th of Auguse, he lived as usual, consuming daily about 500 grammes of bread. Passed about three litres of saccharine urine, dark colored, of the odor of whey, of sp. gr. 1·032, rotatory power 7, the length of the tube being 313. It was thence concluded that the urine contained about 52 grammes of sugar per pint, and that the total amount of that principle passed in 24 hours, was about 168 grammes.

The treatment consisted in—1. Replacing ordinary bread by that prepared from gluten—2. Wearing a complete suit of new flannel—3. The use of a mixture containing 17 grammes of carbonate of ammonia, 20 grammes of rue, 20 grammes of syrup, and 100 grammes of water. In the evening a bolus of 2 grammes of theriacum and 25 milligrammes of opium was administered. These means caused abundant perspiration, which had been long suppressed; the thirst diminished as did also the quantity of urine.

This regimen was continued till the 18th, on which day the urine being examined was found acid, more highly colored, and of a natural taste and smell; the quantity passed was somewhat above a pint, sp. gr. 1·010. Rotatory power, 0. No trace of sugar.

The regimen above mentioned, was continued, only that the gluten bread was suspended and the use of common bread resumed. On the 21st, the urine was examined. Odor and color natural—quantity as before, but the sp. gr. was 1·028—Rotatory power 5·5, the length of the tube being 309. The quantity of sugar then is about 40 gr. per litre, but the total passed in 24 hours is only about 62 gr.

Notwithstanding the re-appearance of sugar in the urine, the use of ordinary bread was persevered in, the clothing, however, was made still warmer, and the dose of carbonate of ammonia and of opium was doubled.

25th August, the urine was again examined. Rotatory power, 0. Sp. gr. 1·020. Quantity, characters, and composition natural.

27th. Characters of the urine unaltered. Sp. gr. 1·018. The diabetes is cured. Ten days treatment have sufficed to re-establish the functions of the skin, to restore the strength and energy, and what is very remarkable, vision is now as strong as ever.

[M. Bouchardat concludes his paper by saying:—]

At first sight it might seem that these four patients were all submitted to identical influences. They were all treated with gluten bread, and preparations of ammonia and opium, and yet the urine resumed its natural composition in the two last cases alone. The cause of this difference is, that flannel clothing was not employed in the two first cases, while it was employed in the two latter cases. The urine of the two first patients became alkaline under the influence of carbonate of ammonia, that salt was eliminated by the urine, and exerted no diaphoretic effect. In the two last cases the function of the skin was stimulated by the use of flannel, and the carbonate of ammonia did not pass into the urine, which remained constantly acid. When sugar re-appeared in the urine of M. A., additional flannel clothing was directed, so as to keep up constant diaphoresis, and the case terminated successfully.—*Dublin Medical Press.*

Diuretics in Phthisis, Chronic Catarrh, &c.

Dr. Clendinning, in some clinical lectures that he has been delivering, has been directing attention to the use of diuretics in the above-mentioned affections. His reasoning is, at the very least, ingenious. 'Now,' says he, 'the use of these diuretics in cases where what are called expectorants are commonly chosen, seems worthy of trial in many cases of chronic pulmonary catarrh, simple or complicated. There is no use, I think, in stimulating action in the exhalent surfaces or secreting vessels of the air-passages by means of expectorants, except in the acute or actively inflammatory stages and states of catarrhs of the lungs. When the disease has become indolent, chronic, or passive, the best treatment is that which is most analogous to the proper management of other habitual fluxes or excessive discharges; namely, first, by direct repression of the disease by inhalation of appropriate vapors or gases, or circuitously by means of astringents, such as lead, alum, zinc, or copper, by the stomach, &c.; and, secondly, by derivatives which cause determinations of blood, and of nervous action to other organs and tissues, and therefore away from the surface of the air-tubes; such are emetics, purgatives, blisters, warm-baths, &c. This view is confirmed by the partiality of some of the first authorities of the profession to several drugs which are unquestionably diuretics, and are also supposed to be possessed of expectorant powers; I mean squill, terebinthinates, particularly copaiba and other balsams, lobelia, nitrous ether, &c. &c. The occasional efficacy of each of those in chronic catarrh is unquestionable, and the diuretic property of each of them is quite certain, but their expectorant power in some measure, if not altogether hypothetical. The view I am now explaining is further confirmed by the fact, that in chronic catarrhs, antimony, and tartar emetic particularly, are rarely employed as expectorants merely, while ipecacuanha is less frequently used very much and less successfully, I am satisfied, than in acute bronchitis; yet none can doubt the power of either of those over acute inflammations of the pulmonary surfaces or substance.'—*London Lancet.*

Nicotine.

M. Barral has succeeded in obtaining this alkali from tobacco. Its capability of saturation is very feeble, when compared to that of other alkalies, but it acts in the most powerful and rapid manner on the animal economy.

THE COLLATERAL SCIENCES.

On the Uses of the Liver.

BY JOHN BOSTOCK, M. D., F. R. S., ETC.

[In our nineteenth number, we gave a very interesting explanation of the uses of the portal circulation, by Dr. R. Willis, in which he arrives at the conclusion that, 'it is a contrivance, a most admirable contrivance, to economise arterial blood.' Dr. Bostock says that the remarks of Dr. Willis were read by him with much interest: especially, as they coincided with some of his own views on the subject. He says:—]

When we take a general view of the animal economy, and especially, when we inquire into the relation which its different functions bear to each other, although we must consider the whole of them as bearing their part in maintaining the system in its perfect state, yet there are some which would appear to be more immediately essential to its existence; among these we regard that series of actions, by which the materials of which the body is composed are received into the stomach, and, after experiencing the necessary change in the appropriate organs, are finally deposited in the blood, constituting the respective functions of digestion, chylification, and absorption. The matter thus deposited in the blood-vessels is destined to supply the demands of the system in the processes of growth and nutrition, as well as for the reparation that may be required, either from the effect of natural decay, or from accidental injury. Now, in order that there may be, at all times, sufficient materials to supply every contingency, there must, in most cases, be a superfluity, and it therefore becomes necessary that there should be some regular mode of discharge in this superfluous matter. The elements which enter into the composition of one aliment, and which, after due elaboration, are deposited in the blood, may be considered as essentially consisting of carbon, azote, hydrogen, and oxygen; and with respect to at least the three first of these elements, a distinct organ is provided for the removal of any superfluous quantity of them which may exist in the blood, after supplying all the wants of the system. The processes by which this removal is effected, and which may be styled depurative, are performed for the three elements respectively by the lungs, the kidneys, and the liver.

With respect to the lungs, I may remark that this organ affords a beautiful illustration of that admirable system of adjustment and contrivance, which forms so conspicuous a feature in the animal economy. We conceive the primary and specific object of the respiration to be the evolution of caloric, an effect which is produced by the union of a portion of the oxygen of the inspired air with a portion of the carbon of the venous blood. Now, this combination of oxygen and carbon, by which heat is liberated, constitutes one of the depurative processes; and it is the one which is the most essential to the well-being of the system; for the excess of carbon, which affords the fuel for the 'slow combustion' in the lungs, were it to remain in the blood, would render it totally unfit for performing its appropriate functions, or even for the temporary continuance of life.

The second of the depurative processes, that by which the superfluous azote is removed from the blood, is effected by the kidney. The removal of this element proceeds upon a somewhat different principle from that of the carbon. We are not aware of any immediate injury or deleterious effect which the excess of azote produces upon the system, and, therefore, it was not necessary that the whole of the blood should pass through this purifying organ; hence a comparatively small portion only of the blood is carried to the kidney, which secretes or separates from it the highly azotized substance, the urea. With respect to the circumstances which promote the action of the kidney, we may conjecture, that it will be excited by the nature of the fluid that is conveyed to it, and that, when the blood has any of its constituents in undue proportion, it may possess a stimulating quality, adapted to increase the secretion of the urea. And besides the urea, the kidney appears to be one of the great outlets, by which the system is freed from any superabundant water which it may contain, and is thus peculiarly well adapted to carry off all the urea which is generated, as well as any excess of saline matter which may exist in the blood. The kidney may, indeed, be regarded as a kind of secondary cloaca; the intestinal canal being the channel for carrying off the residual part of the food, after the separation of its nutritive matter, while the kidney discharges the heterogeneous substances which have been received by the blood-vessels, but which, being no longer required, or having performed their appropriate functions, are to be regarded as residual. And with respect to the discharge of water from the system, we have here another example of that plan of compensation, on which we have already had occasion to remark. A quantity of aqueous vapor is exhaled from the lungs, which is increased or diminished according to the temperature of the atmosphere, and various other circumstances, external and internal, but when it is not carried off by the lungs in due quantity, the superfluous fluid is discharged by the kidney.

The third of the depurative processes, that by which the superfluous hydrogen is removed from the blood, is effected by the liver, but by a different arrangement from that employed either in the lungs or the kidney. In the case of the liver, it is only a comparatively small portion of the blood which is conveyed to the organ for the purpose of purification, thus differing from the analogous operation in the lungs, while it also differs from that in the kidney, by receiving venous, instead of arterial blood. Although it may be difficult to assign any reason for this arrangement, which can be considered as more than conjectural, yet we may form some speculations on this subject, which are, I conceive, at least plausible. The blood, after passing through the pulmonic circulation, is sent into the great systematic arteries, purified from its superfluous carbon. The superfluous azote, and the various saline substances are next removed by the kidney, after which the whole of the blood is returned from all parts of the body and conveyed to the great venous trunks. A portion of this blood is carried to the liver, which organ, like the lungs, exercises a double function; the blood is freed from a quantity of superfluous matter, while, by this depurative process, a substance is generated, into the composition of which hydrogen enters in considerable proportion, and which is essential to the proper action of the digestive organs. I agree with Dr. Willis in the opinion, that the selection of any particular portion of the venous blood depends entirely upon the anatomical relation of the parts, and not upon any chemical difference in the nature and quantity of its constituents. And we may here remark upon the compensating power of the liver. When, from any cause, a less quantity of carbon is required for the evolution of heat in the lungs, than is consistent with the healthy constitution of the blood, the liver would appear to be the organ by which this irregularity is rectified, by an increased secretion of bile. We have thus an additional provision made in the arrangements of the system to prevent an undue accumulation of carbon, an element which, when it exists in excess, appears to exert a positively deleterious influence. But with respect to azote and hydrogen, the case is different. Although we must conceive that an excess of these elements is more or less inconsistent with the maintenance of the healthy state of the system, yet it is not so immediately injurious, and we, consequently, have no compensating organs, by which such excess may be removed, in defect of the due operation of the kidney and the liver.

With respect to the oxygen, there appears to be no depurative process by which it is removed from the blood. Probably the continued expenditure of this element, in almost every operation of the system, when either the muscles or the nerves are called into action, may prevent its undue accumulation, and even should we admit of the existence of a hyperoxygenized state of the blood, we are not aware that any immediate evil would result from it. We may also conjecture, that when the blood contains an excess of oxygen, this redundant quantity becomes united to a portion of carbon, so as to form an oxide, which we may conceive to be less deleterious than the carbon in its uncombined state.—*Lond. and Edin. Month. Jour. of Med. Science.*

ITEMS AND INTELLIGENCE.

American Society of Dental Surgeons.

This excellent association held its annual meeting in Boston, on Tuesday, Wednesday and Thursday, the 19th, 20th and 21st July, at the lecture room of the Medical College in Mason street. The attendance was larger than on any previous occasion, there being only three members of the Society in New England who were not in attendance. The Society were happy in receiving the hospitalities of their Boston brethren, all of whom attended the lectures and business of the Association whenever their engagements would permit. The presence and co-operation of the venerable Messrs. Greenwood and Peabody were particularly grateful to the feelings of the younger members of the Society.

Thirty-six new members were elected into the society, four of whom were from the New England States. Many other individuals made application for membership, but their names were laid over for furtheir investigation. It is an opinion of the members of this Society, that its usefulness and perpetuity are intimately connected with the moral, intellectual and professional character of those who compose it. They are therefore wisely cautious in admitting members.

The public exercises of the Society in Boston consisted of the following dissertations, viz.:—Introductory address, by Eleazer Parmely, of New York. On the Diseases of the Maxillary Sinus, by C. A. Harris, M. D., of Baltimore. On the same subject, by H. H. Hayden, M. D., of Baltimore. On Salivary Calculus, by Edw. Maynard, M. D., of the City of Washington. On the Surest Methods of Degrading the Dental Profession, by Solyman Brown, M. D., of New York.

At the close of its Session, the Society accepted of an invitation from the Boston Society of Natural History to visit its collection.

The officers for the current year are :—H. H. Hayden, M. D., of Baltimore, President. Eleazer Parmely, M. D., of New York ; N. C. Keep, M. D., of Boston ; Lewis Roper, M. D., of Philadelphia, Vice Presidents. C. A. Harris, M. D., of Baltimore, Corresponding Secretary. Solyman Brown, M. D., of New York, Recording Secretary. Leonard Mackall, M. D., of Baltimore, Treasurer. J. H. Foster, M. D., of New York, Librarian.—*Boston Med. and Surg. Journal.*

Books, &c. Received.

Elements of Chemistry. By ROBERT KANE, M. D., M. R. I. A., Professor of Natural Philosophy to the Royal Dublin Society. An American Edition, with additions and corrections, and arranged for the use of the Universities, Colleges, Academies, and Medical Schools of the United States, by JOHN W. DRAPER, M. D., Professor of Chemistry in the University of New York. New York : Harper & Brothers. 1842. 8vo. pp. 704. [Notice in our next.]

Constitution and Bye-Laws of the New Haven Medical Association. 1842.

The American in Egypt. By JAMES EWING COOLEY. With Engravings. New York : D. Appleton & Co. 1842. 8vo. pp. 610. [Notice in our next.]

To Correspondents.

Dr. WALLACE's paper will appear in our next.

A 'Subscriber's' query will be answered in our next.

A gentleman who recently graduated in medicine at Trinity College, Dublin, and who was for some time connected with a public medical institution in that city, is desirous of obtaining employment as an anatomical demonstrator,—as an assistant to an established physician,—or in any other eligible way. The requisite information will be cheerfully afforded at this office.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Aug. 20, 1842.

35 Men, 26 Women, 59 Boys, 53 Girls. Total, 173.

DISEASES.

Apoplexy	1	Intemperance	0
Asthma	1	Inflammation	2
Asphyxia	1	Of liver	2
Abscess	1	Of bladder	0
Aneurism	0	Of brain	3
Bleeding	1	Of stomach	4
Bleeding from stomach	0	Of throat	1
Bleeding from uterus	0	Of lungs	6
Burned or scalded	0	Of bowels	4
Casualties	0	Of chest	1
Cholera infantum	36	Of kidneys	1
Cholera morbus	2	Insanity	0
Congestion of the Brain	4	Jaundice	0
Consumption	18	Killed or murdered	0
Convulsions	11	Lues Venera	0
Croup or hives	0	Mortification	2
Debility	1	Malformation	0
Delirium tremens	2	Marasmus	5
Diabetes	1	Measles	0
Diarrhœa	7	Old age	0
Death from poison	0	Organic disease of heart	0
Dropsy	4	Palsy	2
Dropsy in head	4	Rupture	0
Dropsy in the chest	2	Rheumatism	0
Drowned	4	Spinal disease	0
Dysentery	9	Suicide	2
Erysipelas	3	Sprue	1
Epilepsy	0	Small-pox	2
Fever	2	Scrofula	0
Scarlet	2	Teething	3
Typhoid	2	Use of laudanum	1
Puerperal	2	Unknown	2
Remittent	1	Ulceration of throat	0
Bilious	1	Ulcers	0
Inflammatory	1	Varioloid	1
Intermittent	3	Whooping cough	3
Fracture	1	Worms	1

JOHN H. GRISCOM, City Inspector.

City Inspector's Office, Aug. 22, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, SEPTEMBER 3, 1842. No. 10.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons, New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XX.

'Typhoid Pneumonia'—*'Bilious Pneumonia'*—*'Gangrene of the Lungs.'*

GENTLEMEN:—

In a former lecture I described the acute inflammatory form of pneumonia as it occurs in adults. Sometimes, however, the disease assumes a quite different form and is called the 'typhoid pneumonia,' in some instances epidemic, and in others endemic,—that is, it occasionally fixes itself in a particular region, and is for a period the prevailing disease, other diseases showing a tendency to run into it. Again, we notice it not unfrequently in old people debilitated and exhausted by other diseases, and it is also very common in persons of intemperate habits. We often find it connected with delirium tremens. Now this form of the disease can hardly be said to be a distinct form, inasmuch as it presents the general characters of pneumonia of adults with the exception that it is accompanied by the typhoid symptoms. Usually at a very early period there are symptoms of great prostration, and sometimes they mark the onset of the disease. To attempt to describe this disease as an epidemic, would be entirely foreign from my purpose. I have never yet seen a case of it, and therefore I will not attempt a description of it. Still this typhoid form of the disease is occasionally met with in intemperate persons and old people, and presents peculiarities with which it is proper that you should become acquainted. The extreme rapidity with which this form of the disease passes into the stage of suppuration is remarkable. In less than forty-eight hours I have seen the lungs completely loaded with suppurating portions. This is entirely foreign from what we notice in healthy adults, in whose cases this disease frequently goes through a period of three or four weeks before suppuration occurs. Even when the disease terminates fatally suppuration is rare. But in drunkards it is quite different, and almost in all cases we find after death, the evidence of extensive suppuration. In these cases, then, the disease shows a tendency to assume very rapidly the typhoid form. The pulse is greatly reduced—the patient is much exhausted, and cannot rise up in bed in order to submit to the necessary examination—the tongue is loaded with a brown coat—delirium and the usual symptoms of cerebral disturbance and convulsions ensue, and the case assumes all the ordinary characters of typhoid disease.

Now it would, I think, be improper to class this form of the disease with that which is occasionally presented to our notice in complication with fever. It frequently happens that cases of common continued fever will present characteristics of inflammatory affections of the lungs. A patient thus affected will very frequently contract pneumonia in the progress of the febrile disease, and which, from the vital powers being soon exhausted, will speedily assume a typhoid character, and the case will very likely terminate fatally with this complication. Now this is an accidental circumstance—a secondary affair altogether, and has nothing to do with those pure cases of pneumonia, which from some peculiarity of constitution or epidemic influence, assume sooner or later a typhoid form.

Again, there is a form of pneumonia, which has been sometimes described as the bilious pneumonia. This form is, however, very rare in this part of the world—I do not recollect having ever met with a well-marked case of it. In the Southern and Middle States it is said, however, to be very prevalent. In Maryland, Washington City, and in the Carolinas, bilious pneumonia is a frequent and fatal disease. President HARRISON died of this form of disease—pneumonia complicated with derangements of the stomach and of the liver, and accompanied by nausea and vomiting, and more or less evidences of hepatic derangement and congestion.

Now you will recollect that when I spoke of the complications of pneumonia, I spoke of cases in which the liver is sympathetically affected, and that that generally occurred when the pneumonia affected the right lung, and that it was held by some that this was owing to contiguous sympathy. But this is not sustained by facts. I have met with such cases, and the pneumonia affected the upper portion of the lung—the intermediate portion being quite healthy. But the effect of this complication will be the production of jaundice—the skin becomes yellow—the alvine evacuations lose their peculiar character—the urine becomes loaded with bile—in short, all the ordinary symptoms of jaundice are presented. And you will observe that as the inflammation yields the jaundice disappears. This, however, is not the form of the disease described as bilious pneumonia by any means. I conceive that it is a form of disease which develops itself in certain regions, where the bilious constitution, if I may so speak, prevails, and which predisposes the disease to assume this character.

I will here say a few words in relation to 'gangrene of the lungs.' In speaking of this I remarked, on a former occasion, that I did not regard it as a consequence of inflammation of the lungs. We know that gangrene does occasionally result in this way. But we have also another form of gangrene which is very common in old subjects, and which does not appear to depend at all upon any previous inflammation, but is simply owing to obstruction of the circulation, and which we notice in the lower extremities, sometimes in consequence of ossification of the arteries. In other cases they have been found plugged up with coagulable lymph, and the circulation in the great vessels being thus cut off, the part becomes gangrenous, and then an inflammatory action is set up, the object of which is to separate by ulceration the dead part from the surrounding living part, and so effect the restoration of health; an effort, it must be admitted, generally unsuccessful, but still a healthy effort. When, after death, we find evidences of inflammation surrounding the gangrenous portion of the lung, we know it to be secondary; and one proof of this is, that the gangrene is not preceded by evidences of inflammation. The gangrene appears first, and the inflammatory affection follows, just as in the lower extremities. It is not uncommon to find gangrenous eschars surrounded by healthy pulmonary tissue, although we usually find them surrounded by that tissue in the first or second stage of inflammation; the fact, however, of their occurrence whilst the surrounding portion of lung is healthy, proves that gangrene is not dependent on any antecedent inflammation, which is on the contrary always a secondary affair. This is a very rare form of disease; yet I have seen one case of this form of the disease in a boy not over fifteen or sixteen years of age. This case was not verified by post-mortem examination, for if I recollect right the patient recovered, but all the rational and physical signs pointed out the existence of gangrene of the lungs, and in this case there had been no evidence of antecedent disease. But in vitiated, broken-down constitutions, and in the majority of cases where this disease occurs, we notice obstruction to the circulation. We find that the patient had complained for a long period before of oppression of the respiration, with cough and pain in the side. By and by symptoms of gangrene develop themselves, slowly and insidiously indeed, but the disease is finally revealed by signs so unequivocal that no observer can mistake or overlook them. Now it is not usually the case that we can recognize the disease till the gangrenous eschar shows a tendency to suppurate. When it is simple gangrene surrounded by healthy pulmonary tissue, it is not easy to ascertain it. It is possible that there may be such a strong gangrenous fœtor of the breath that we may be led to suspect this state of things, but usually this is not so marked in this stage as to reveal the nature of the case. Neither are the physical signs strongly marked, the gangrenous eschar being usually circumscribed. If we could discover the point where the eschar exists, we would find dulness on percussion there, and absence of the respiratory murmur; but usually it is extremely difficult to detect the precise location of these eschars. But as soon as any disposition to throw off the gangrenous portions of lung commences, then the symptoms are clear enough. Then we have the peculiar odor of the breath extremely well marked, and perceptible even at a distance from the patient. The breath is indeed horribly offensive. Now it is said by those who have studied this disease, and I have never noticed this fact myself, and cannot therefore authenticate it,—that just before this gangrene commences, the expectoration has a peculiar odor, nearly resembling that of new-made plaister. As I have just stated, I have never noticed this, and therefore I cannot state it on my own authority. But as soon as the gangrenous mass fairly begins to suppurate, and the deliquium is poured out into the bronchial tubes, then the odor becomes so distinct that you cannot mistake it. And as this takes place, we notice a gradual change also in the character of the expectoration. At first the expectoration is simply catarrhal, mixed, perhaps, with the rusty sputæ of pneumonia. But as this gangrenous eschar is expectorated, we have portions of gangrenous lung thrown up, so distinct that no one can doubt their character. Sometimes we also notice white shreds of cellular tissue thrown up in considerable quantity—this is the cellular tissue of the lung surrounding the eschar, which has become gangrenous, and is precisely analogous to the cellular tissue which becomes similarly changed in phlegmonous erysipelas. You will find that this gangrenous eschar gradually goes on discharging its contents, the gangrenous matter diminishes in quantity, and its place is occupied by purulent matter, which is discharged from an abscess thus formed in the pulmonary tissue. You cannot in this stage of the disease have any difficulty in ascertaining its real nature. In the first place, you have all the ordinary evidence of the existence of an abscess—the gradual development of cavernous respiration—the gurgling sound—pectoriloquy—usually also the crepitant rattle, and bronchial respiration, which subside when the abscess is completely formed, and is lined with false membrane.

These cases, occurring as they do in debilitated subjects, are apt to be attended with symptoms of great prostration, and very seldom require active treatment, although accompanied by the secondary inflammation which I described. It is usually necessary to support the strength of the patient, till the eschar be formed, when the case may terminate favorably. Generally, however, the result is fatal. There is no power in the system to rally. In some rare cases, notwithstanding, the patient is restored to health.

[The remaining portion of this excellent lecture, which was devoted to the consideration of the *treatment* of pneumonia, is postponed till our next.]

REVIEW DEPARTMENT.

I. *Animal Chemistry, or Organic Chemistry in its applications to Physiology and Pathology.* By Justus Liebig, M. D., Ph. D., F. R. S., M. R. I. A., Professor of Chemistry in the University of Giessen. Edited, from the Author's manuscript, by William Gregory, M. D., F. R. S., M. R. I. A., Professor of Medicine and Chemistry in the University and King's College, Aberdeen. New York: Wiley & Putnam, 161 Broadway. 1842. 12mo. pp. 357.

II. *Elements of Chemistry.* By Robert Kane, M. D., M. R. I. A., Professor of Natural Philosophy to the Royal Dublin Society. An American Edition, with additions and corrections, and arranged for the use of the Universities, Colleges, Academies, and Medical Schools of the United States, by John W. Draper, M. D., Professor of Chemistry in the University of New York. New York: Harper & Brothers. 1842. 8vo. pp. 704.

We have seldom more regretted the restrictions which our limited space, and the nature of our journal, impose upon us in noticing new works, than on the present occasion. The science of chemistry presents to the philosophic mind, a field of investigation, wide, inviting, and teeming with the greatest interest and usefulness, and the works before us are the production of toiling and successful laborers, who merit the most courteous reception, and whose works should be in the hand of every lover and student of the noble science to whose literature they have made such an important accession.

We will endeavor to present our readers with a brief analysis of the profound work of Liebig; and we trust that the insight, transient and imperfect as it must needs be, which we will thus afford, to those invaluable pages, will awaken in the minds of all, a desire to attain possession of the treasures which they contain.

The first part consists of the examination of the processes employed in the nutrition and reproduction of the various parts of the animal economy. In vegetables, as well as in animals, we recognize the existence of a force in a state of rest. It is the primary cause of growth or increase in mass of the body in which it resides. By the action of external influences, such as by pressure of air and moisture, its condition of static equilibrium is disturbed; and, entering into a state of motion or activity, it occupies itself in the production of forms. This force has received the appellation of vital force, or vitality. Vitality, though residing equally in the animal and vegetable kingdoms, produces its effects by widely different instruments. Plants subsist entirely upon manures belonging to inorganic nature.

Atmospheric air, the source whence they derive their nutriment, is considered to be a mineral by the most distinguished mineralogists. All substances, before they can form food for plants, must be resolved into organic matter; but animals, on the other hand, require highly organized atoms for nutriment. They can only subsist upon parts of an organism. They possess within them a vegetable life, as plants do, by means of which they increase in size, without consciousness on their part; but they are distinguished from vegetables by their faculties of locomotion and sensation—faculties acting through a nervous apparatus. The true vegetative life of animals is in no way dependent upon this apparatus, for it proceeds when the means of voluntary motion and sensation are destroyed; and the most energetic volition is incapable of exerting any influence on the contractions of the heart, on the motion of the intestines, or on the processes of secretion. All parts of the animal body are produced from the fluid circulating within its organism, by virtue of vitality, which resides in every organ. A destruction of the animal body is constantly proceeding. Every motion, every manifestation of force, is the result of the transformation of the structure, or of its substance. Every conception, every mental affection, is followed by changes in the chemical nature of the secreted fluids. Every thought, every sensation, is accompanied by a change in the composition of the substance of the brain. It is to supply the waste thus produced, that food becomes necessary. Food is either applied in the increase of a mass of a structure (*i. e.* in nutrition), or is applied in the replacement of a structure wasted (*i. e.* in reproduction) The primary condition for the existence of life is the reception and assimilation of food. But there is another condition equally important—the continual absorption of oxygen from the atmosphere. All vital activity results from the mutual action of the oxygen of the atmosphere and the elements of the food. All changes in matter proceeding in the body are essentially chemical, although they are not unfrequently increased or diminished in intensity by the vital force. The influence of poisons and remedial agents on the animal economy proves that the chemical combinations and decompositions proceeding therein, and which manifest themselves in the phenomena of vitality, may be influenced by bodies having a well-defined chemical action. Vitality is the ruling agent by which the chemical powers are made to subserve its purposes; but the acting forces are chemical. It is from this view, and no other, that we ought to view vitality.

According to Lavoisier, an adult man takes into his system, every year, 837 lbs. of oxygen, and yet he does not increase in weight. What, then, becomes of the enormous quantity of oxygen introduced in the course of the year into the human system? The carbon and hydrogen of certain parts of the body have entered into combination with the oxygen introduced through the lungs and through the skin, and have been given out in the form of carbonic acid and the vapor of water. At every moment, with every expiration, parts of the body are thus removed, and are emitted into the atmosphere. No part of the oxygen inspired is again expired as such. Now, it is found that an adult inspires 32½ oz. of oxygen daily; this will convert the carbon of 24 lbs. of blood into carbonic acid. He must therefore take as much nutriment as will supply this daily loss; and, in fact, it is found that he does so; for the average amount of carbon in the daily food of an adult man, taking moderate exercise, is 14 oz., which requires 37 oz. of oxygen for their conversion into carbonic acid. But it is obvious, as the inspired oxygen can be removed only by its conversion into carbonic acid and water, that the amount of food necessary for the support of the animal body must be in direct ratio to the quantity of oxygen taken into the system. Thus a child, in whom the organs of respiration are naturally in a state of great activity, requires food more frequently and in greater proportions to its bulk than an adult, and is also less patient of hunger. A bird, deprived of food, dies on the third day; whilst a serpent, which inspires a mere trace of oxygen, can live without food for three months. The capacity of the chest in an animal is a constant quantity; we therefore inspire the same volume of air whether at the pole or the equator; but the weight of the air, and consequently of the oxygen, varies with the temperature. Thus an adult man takes into the system daily 46,000 cubic inches of oxygen, which, if the temperature be 77°, weigh 32½ oz.; but, when the temperature sinks down to the freezing-point (32°), it will weigh 35 oz. Thus an adult in our climate in winter may inhale 35 oz. of oxygen; in Sicily he would inspire only 28½ oz.; and if in Sweden, 36 oz. Hence we inspire more carbon in cold weather, when the barometer is high, than we do in warm weather; and we must consume more or less carbon in our food in the same proportion. In our own climate the difference between summer and winter in the carbon expired, and therefore necessary for food, is as much as an eighth.

Even when we consume equal weights of food, an infinitely wise Creator has so adjusted it as to meet the exigencies of climate. Thus the fruit on which the inhabitants of the south delight to feed contains only 12 per cent. of carbon, whilst the bacon and train oil enjoyed by the inhabitants of the arctic region contain from 66 to 80 per cent. of the same element. Now the mutual action between the elements of food and the oxygen of the air is the source of animal heat. All living creatures, whose existence depends on the absorption of oxygen, possess within themselves a source of heat independent of the medium in which they exist; this heat, in Professor Liebig's opinion, is wholly due to the combustion of the carbon and hydrogen contained in the food which they consume. Animal heat exists only in those parts of the body through which arterial blood (and with it oxygen in solution) circulates. The carbon and hydrogen of food, in being converted by oxygen into carbonic acid and water, must give out as much heat as if they were burned in the open air; the only difference is, that this heat is spread over unequal spaces of time, but the actual amount is always the same.

The temperature of the human body is the same in the torrid as in the frigid zone; but, as the body may be considered in the light of a heated vessel, which cools with an accelerated rapidity, the colder the surrounding medium, it is obvious that the fuel necessary to retain its heat must vary in different climates. Thus less heat is necessary in Palermo, where the temperature of the air is that of the human body, than in the polar regions, where it is about 90 degrees lower. In the animal body the food is the fuel, and by a proper supply of oxygen we obtain the food given out during its combustion in winter. When we take exercise in a cold atmosphere, we respire a greater amount of oxygen, which implies a more abundant supply of carbon in the food; and by taking this food we form the most efficient protection against the cold. A starving man is soon frozen to death; and every one knows that the animals of prey of the arctic regions are far more voracious than those of the torrid zone. Our clothing is merely an equivalent for food, and the more warmly we are clothed, the less food we require. Were we to go destitute of clothes, like certain savage tribes,—or if, in hunting or fishing, we were exposed to the same degree of cold as the Samoyedes,—we could with ease consume 10 lbs. of flesh, and perhaps a dozen tallow candles to the bargain, as warmly-clad travellers have related with astonishment of those people. Then could we take the same quantity of brandy or blubber of fish without bad effects, and learn to appreciate the delicacy of train oil. We thus perceive an explanation of the apparent anomalous habits of different nations. The maccaroni of the Italian, and the train oil of the Greenlander and the Russian, are not adventitious freaks of taste, but necessary articles fitted to administer to their comfort in the climates in which they have been born; the colder the region, the more combustible must the food be. The Englishman in Jamaica perceives with regret the disappearance of his appetite, which in England had been a constant recurring source of enjoyment; by the use of aromatics he creates an artificial appetite, and eats as much food as he did at home; but he thus unfits himself for the climate in which he is placed,—for sufficient oxygen does not enter his system to combine with the carbon consumed, and the heat of the climate prevents him taking exercise to increase the number of his respirations. The carbon of the food is therefore forced into other channels, and disease results. England, on the other hand, sends her dyspeptic patients to southern climates. In our own land their impaired digestive organs are unable to fit the food for that state in which it best unites with the oxygen of the air, which therefore acts on the organs of respiration themselves, thus producing pulmonary complaints; but when they are removed to warmer climates, they absorb less oxygen and take less food, and the diseased organs of digestion have sufficient power to place the diminished amount of food in equilibrium, with the respired oxygen; just as we would expect from these views, in our own climate, hepatic diseases, or diseases arising from excess of carbon, are more prevalent in summer, and in winter pulmonic diseases, or those arising from an excess of oxygen.

The professor then goes on to disprove the notion that animal heat is due to nervous influence and not to combustion—an error which had its origin in supposing that the combustion proceeds in the blood itself. He also shows that animal heat must not be ascribed to the contraction of the muscles, but that the heat evolved by the combustion of carbon in the body is sufficient to account for the phenomena of animal heat. He shows that the 14 ounces of carbon which are daily converted into carbonic acid in an adult disengage no less than 197·477° of heat; a quantity which would convert 24 lbs. of water, at the temperature of the body, into vapor; and if we assume that the quantity of water vaporised through the skin and lungs amounts to 3 lbs., then we have still 146·380° of heat to sustain the temperature of the body. And when we take into calculation the heat evolved by the hydrogen of the food, and the small specific heat possessed by the organs generally, no doubt could be entertained that the heat evolved in the process of combustion, to which the food is subjected in the body, is amply sufficient to explain the constant temperature of the body. From what has preceded, it is obvious that the amount of carbon consumed in food ought to depend on the climate, density of air, and occupation of the individual. A man will require less carbon when pursuing a sedentary occupation than when he is engaged in active exercise.

Professor Liebig, having thus discussed the source of animal heat, proceeds next to consider what are the ingredients in the food which may properly be considered to be nutritious. Physiologists conceive that the various organs in the body have originally been formed from blood. If this be admitted, it is obvious that those substances only can be considered as nutritious which are susceptible of being transformed into blood. The professor then enters upon an examination of the composition of blood, and of the identity in chemical composition of fibrine and albumen. The nutritive process is simplest in the case of carnivora. This class of animals live on the blood and flesh of the graminivora, whose blood and flesh is identical with their own. In a chemical sense, therefore, a carnivorous animal, in taking food, feeds upon itself; for the nutriment is identical in composition with its own tissues. He next inquires, from what constituents of vegetables the blood of the graminivorous animals is produced. The nitrogenised compounds of vegetable forming the food of graminivorous animals are called vegetable fibrine, vegetable albumen, and vegetable caseine. Now, analysis has led to the interesting result, that they are of exactly the same composition in 100 parts; and, what is still more extraordinary, they are absolutely identical with the chief constituents of the blood—animal fibrine and animal albumen. By identity, be it remarked, we do not imply similarity, but absolute identity, even as far as their inorganic constituents are concerned. These conditions show the beautiful simplicity of nutrition. In point of fact, vegetables produce, in their inorganism, the blood of all animals. Animal and vegetable life are therefore most closely connected. The professor has still to account for the use of the substances in food which are absolutely destitute of nitrogen, but which we know are absolutely necessary to animal life. In all these we find a great excess of carbon, and but very little oxygen. By a train of admirable reasoning, he arrives at the interesting conclusion, that they are solely exhausted in the production of animal heat, being converted by the oxygen of the air into carbonic acid and water. This portion of the volume contains an ingenious and important view of the use of bile in the animal economy, the truth of which quantitative physiology dare not deny. When exercise is denied to graminivorous and omnivorous animals, this is tantamount to a deficient supply of oxygen. The carbon of the food not meeting with sufficient oxygen to consume it, passes into the compounds containing a large excess of carbon, and deficiency of oxygen; or, in other words, fat is produced. Liebig is led to the startling conclusion, that fat is altogether an abnormal and unnatural production, arising from the adaption of nature to circumstances, and not of circumstances to nature—altogether arising from a disproportion of carbon in the food to that of the oxygen respired by the lungs, or absorbed by the skin. Wild animals in a state of nature do not contain fat. The Bedouin or Arab of the desert, who shows with pride his lean, muscular, sinewy limbs, is altogether free from fat; and the professor points out the diseases arising from this cause, and furnishes some valuable hints to therapeutics. From all that has transpired, we may sum up the nutritious elements of food as follow:—The ingredients adapted for the formation of the blood, and which the professor calls the plastic elements of nutrition, are as follow:—Vegetable fibrine, vegetable albumen, vegetable caseine, animal flesh, animal blood. The other ingredients of food, being fitted to retain the temperature of the body, he calls the elements of respiration. They are—fat, starch, gum, cane-sugar, grape-sugar, sugar of milk, pectine, bassorine, beer, wine, spirits. These are Professor Liebig's general principles of nutrition. The second part of the work consists of details, in which he examines the chemical processes engaged in the production of bile, of urea, uric acid, and its compounds, as well as of cerebral and nervous substance. The conclusions to which he has arrived on these subjects are of such great and startling interest, that we do not venture to make an abstract of them, without entering into the calculations with which they were accompanied. In the professor's explanatory remarks on digestion, he ascribes a singular function to saliva. This fluid possesses the remarkable property of enclosing air in the shape of froth, in a far higher degree even than soap-suds. This air, by means of the saliva, accompanies the food into the stomach, and there its oxygen enters into combination with the constituents of the food, while its nitrogen is again given out through the lungs or skin. The longer digestion continues, the greater is the quantity of saliva, and consequently of air, which enters the stomach. Rumination, in certain graminivorous animals, has plainly for one object a renewed and repeated introduction of oxygen. The professor further touches upon the use of tea and coffee as an article of food. Recent chemical research has proved that the active principles of tea and coffee—viz., teine and caffeine—are absolutely one and the same body, perfectly identical in every respect. The action of tea and coffee on the system must be therefore the same. How is it that the practice of taking them has become necessary to whole nations? Caffeine (theine) is a highly nitrogenised body. Bile, as is well known, contains an essential nitrogenised ingredient—taurine. Now, Professor Liebig considers that caffeine goes to the production of this taurine; and, if an infusion of tea contains only one-tenth of a grain of caffeine, still, if it contribute, in point of fact, to the formation of bile, the action even of such a quantity cannot be looked upon as a nullity. Neither can it be denied, that, in case of using an excess of non-azotized food, or deficiency of motion, which is required to cause the change of matter in the tissues, and thus to yield nitrogenised matter of the bile, that in such a condition the state of health may be benefited by the use of tea or coffee, by which may be furnished the nitrogenised product produced in the healthy state of the body, and essential to the production of an important element of respiration. The American Indian, with his present habits of living solely on flesh, could not with any comfort use tea as an article of food; for his tissues waste with such rapidity, that, on the contrary, he has to take something to retard this waste. And it is worthy of remark, that he has discovered in tobacco-smoke a means of retarding the change of matter in the tissues of his body, and thereby of making hunger more endurable. Nor can he withstand the captivation of brandy, which, acting as an element of respiration, puts a stop to the change of matter, by performing the function which properly belongs to the products of the metamorphosed tissues.

The third part of Liebig's report treats of the recondite laws of the phenomena of motion; but as it is principally of a speculative character, we pass it over. The professor concludes his valuable communication by two chapters; one on the theory of disease, the other on the theory of respiration. The whole life of animals consists of a conflict between chemical forces and vital powers. In the normal state of the body of an adult both stand in equilibrium. Every mechanical or chemical agency which disturbs the restoration of this equilibrium is a cause of disease. Disease occurs when the resistance offered by the vital force is weaker than the acting cause of disturbance. Death is that condition in which chemical or mechanical powers gain the ascendancy, and all resistance on the part of the vital force ceases. Every abnormal condition of supply or waste may be called disease. It is evident that one and the same cause of disease,—that is, of disturbance,—will have different effects, according to the period of life. A cause of disease, added to the cause of waste, may in old age annihilate the resistance of the vital powers, or, in other words, occasion death; while, in the adult state, it may produce only a disproportion between supply and waste; and in infancy only an abstract state of health, *i. e.* an equilibrium between supply and waste. Professor Liebig argues, from what has preceded, that a deficiency of resistance in a living part to the cause of waste is, in fact, a deficiency of resistance to the action of the oxygen of the atmosphere. The professor's theory may be compared to a self-regulating steam-engine. The body, in regard to the production of heat and of force, acts just like one of those machines. With the lowering of the external temperature, the respiration becomes deeper and more frequent; oxygen is supplied in greater quantity, and of greater density; the change of matter is increased, and more food must be supplied, if the temperature of the body is to remain unchanged. It has been proved that iron is not necessary to the coloring matter of the blood, but that it forms an essential constituent in blood-globules. These globules, it is well known, take no part in nutrition. Professor Liebig conceives that the iron is the great means of conveying to the lungs the carbonic acid formed in the system; and he has made a calculation, that the iron contained in the body could actually convey twice as much carbonic acid as is expelled daily from the system.

Even from this analysis, hurried and imperfect as it is, the high value of the work must be evident. No man who pretends to keep pace with the rapidly advancing progress of physiological science should be without this volume. As the *Quarterly Review* correctly observes, 'this treatise is the first specimen of what modern organic chemistry is capable of doing for physiology; and we have no doubt that from its appearance physiology will date a new era in her advance.'

The reputation of Professor KANE is well established, and his treatise is, in Europe, rapidly growing in the estimation of the scientific world. Its republication in this country, in its present very acceptable form, and under the favorable auspices of its erudite and acute editor—Dr. DRAPER, must be regarded as well worthy of grateful recognition. We do not know any other work on chemistry, which is so well adapted to serve as a class-book. We most heartily commend it to the favorable notice of all public teachers.

GLEANINGS FROM

CUNIER'S ANNALES D'OCULISTIQUE.[*]

TRANSLATED FOR THE LANCET,

BY W. CLAY WALLACE, M. D.

New Method of Extirpating the Eyeball.

BY M. BONNET, OF LYONS.

When we remove the eye in the usual manner, we make the instrument penetrate the fat of the orbit, and we divide the muscles at a distance from their insertion. We cut across the trunks of the nerves distributed to the muscles, and often divide arteries, from which it is difficult to arrest the hæmorrhage. These evils may be avoided by dividing the muscles and the optic nerve at their insertion into the sclerotica, and removing the eye, without injuring the capsule in which it is contained. By operating in this manner, we evidently avoid all fear of hæmorrhage; we only wound the optic nerve, and the incision being separated by fibrous tissue from the fat of the orbit, we avoid the inflammation of which the latter may be the seat, and which might soon be extended to the brain. I have not had an opportunity of putting these ideas into practice on the living subject, but if I met with a favorable case, I should proceed to extirpate the eye in the following manner:—

After having separated the eyelids with the instruments recommended for strabismus, I would divide the internal straight muscle with the precautions taken in that operation; then passing the scissors between the sclerotica and the sub-conjunctival fascia, I would divide all the straight muscles near their insertion. After this, I would have only to divide the two obliqui as near the eye as possible, and then the optic nerve; the eye might thus be raised without affecting any important vessel or nerve, and without penetrating into the fat of the orbit.

The only objection to this method is the difficulty of finding a case in which it might be practiced; the tissues around the eye being generally too much changed, in affections which require extirpation of the organ. I recollect one case in which it might have been performed without inconvenience. The patient was operated on by M. Gensoul; the eye had not lost its shape or size; vision was gone, and the operation was advised solely on account of the pain, which nothing could assuage. In this case was found a melanotic tumor, which had as yet only affected the retina.

Professor Stœber, of Strasburg, has put in practice the method recommended by M. Bonnet. 'Some days ago,' says he, 'I extirpated a melanotic eye, when I partly followed the advice of M. Bonnet, of Lyons, by operating as for strabismus. After having divided the internal straight muscle, and having drawn the eye strongly outward, I easily cut across the optic nerve with curved scissors, and finished the operation by separating from the eye the conjunctiva, and the muscles, near their attachment to the sclerotica. The eye, when removed, appeared as if prepared, the sclerotica being perfectly clean, and without any trace of cellular tissue. The operation was performed in a shorter time than by the usual method, and the hæmorrhage was less.'

Dr. Cunier has, in the same manner, extirpated an eye affected with medullary fungus of the retina. The eye was not deformed, and the optic nerve could be divided in a healthy portion. The operation was easily performed, but the suppuration was greater than he had ever observed, and the granulation was so excessive that for some days it was thought the parts left within the orbit had been also degenerated.

The Use of Spectacles in the Treatment of some Diseases of the Eye.

BY M. FLORENT CUNIER.

It is fair to acknowledge that I was not the first to think of the use of glasses, as a means of exciting the sensibility of the retina. Notwithstanding much research in treatises on ophthalmology, I am indebted for the idea to the advertisement of a quack.

A German called Schlesinger came to Brussels in 1838, and announced with much noise that he cured weakness of sight, defective vision, strabismus, cataract, amaurosis, &c., with glasses *of his invention*. As I then lived at Marieınburg, it was impossible to follow the cures of this quack; but since I came to Brussels I have treated a number of individuals whom I had seen before they were committed to his care, and I am convinced that he effected many cures by the method which he used.

---

[*] Annales d'Oculistique. Publiées par le docteur Florent Cunier, Médecin-Oculiste, Chirurgien de l'Institut Ophthalmique de Bruxelles, etc. Cinquième Année.—Avril, Mai, Juin, 1842. On Souscrit a Bruxelles: Chez le Rédacteur en Chef, Editeur, 13 Montagne Ste-Elisabeth. 8vo.

Annales d'Oculistique. Publiées par le docteur Florent Cunier. 2^{o} Volume Supplémentaire. 1er Fascicule.—Bruxelles: Chez le Rédacteur en Chef, Editeur, 13 Montagne Ste-Elisabeth. 1842. 12mo. pp. 124.

A lady now under my care, had almost entirely lost her sight, from closure of the pupils. Exercise with spectacles so much improved the condition of the left eye, that in six weeks the patient read with a No. 18, and guided herself with accuracy.

M. B. had been for six months under treatment for asthenic amaurosis, arising from excessive masturbation. He could only decipher the large letters of a placard, and could not go out without a guide. Although he had given up the pernicious habit, the disease had resisted all the means which had been used. In fifteen days, Schlesinger made him read small Roman character, with glasses No. 24, and he now enjoys excellent sight.

Pannus, nephelion and hyperkeratosis have also, to my knowledge, been cured by this method.

Schlesinger undoubtedly obtained some good results, but we may accuse him of having also done much injury, by prescribing the use of spectacles to persons affected with encephalo-ophthalmic congestion, habitual photophobia, &c. These patients became worse, and were obliged to have recourse to medicine which did not always succeed in removing the mischief which had been produced.

The glasses used by Schlesinger were plano-convex, and he began the treatment by ascertaining the distance of the visual focus. If, for example, he treated an amaurotic who could decipher double canon print, at the distance of 3 inches, he furnished him with glasses of 3¼ inches focus, to exercise himself in reading during a part of the day, with directions to lay them aside when the eyes became fatigued. When the patient could distinctly distinguish letters, he gave him glasses of 3½ inches, the convexity was then lessened by ¼ of an inch at a time, till he reached No. 5; till No. 9 the diminution was made by ½ inches, by inches till No. 12, and by two inches till No. 24 or 36, the use of which was to be continued for a long time.

Schlesinger pursued the same course in pannus, hyperkeratosis, and chronic irido-capsulitis. In cases where the sensibility of the eyes was increased, he began with glasses of more than eighty inches focus, and increased the power as the eyes became accustomed to the exercise. This is the secret of Schlesinger, and of the quack Wiesecké, of whom France has just been cleared.

The following cases in which I used their method afford useful information:—

Case I.—Madame la Baronne de R., the wife of a celebrated author, habitually costive, but otherwise healthy, perceived fifteen years ago that the sight of the left eye was failing. She had been treated from the commencement, without benefit, by Professor Baud, of Louvain. For eight years the patient could hardly distinguish the title letters on the newspapers *L'Independent* or *Le Moniteur*, nor could she recognize the hour on a clock, further than from one to two inches from the hands. She had never complained of myodesopsia or photopsia.

Madame de R. had reached her fortieth year without suffering headache; she had had two difficult births without serious consequences, and had never complained except from constipation. A sensation of weight in the head was observed when she had been several days without a stool, and then as a laxative she used stewed apples and gingerbread. Her menstruation had been regular, always abundant, and had never given her any trouble. The appearance of muscæ volitantes alarmed her, and induced her to apply to me. The sight of the right eye was good; reading had become fatiguing only a few days before.

In this condition I found the patient about a year ago. The pupils were moderately contracted; that of the left dilated, sometimes very strongly, when the right eye was covered, and did not react with the most intense light. The bottom of the eye was of that grayish green color, which is observed in amaurosis of long duration.

The application of leeches to the anus, the use of emetics, aloes, irritating pediluvia, cutaneous revulsions, and mercurial inunctions, with belladonna, removed the constipation, and encephalo-ophthalmic congestion, and the muscæ disappeared from the right eye. The sight of the left eye remained in the same condition, though I had used strychnine without the least effect. I then determined to have recourse to spectacles.

With a glass No. 3 she with difficulty recognized all the letters of the double cannon type. After some minutes exercise, a kind of dazzling took place, the eyes became filled with tears, and a sort of veil, gradually thickening from gray to a blackish color, hid the letters from the eye. Tension and even pain were experienced in the frontal region, when the patient was obliged to give up the exercise; but a compress soaked in cold water and applied to the forehead, enabled her to renew it almost immediately.

On the second day she read seven times with No. 3½, for eight or ten minutes, before experiencing fatigue; the interval between each exercise being at least an hour. In the evening the letters were easily recognized at the distance of three inches.

On the third day the patient read the cicero character in the morning with No. 4, and in the evening with No. 4½.

On the fourth day I gave No. 5½, with which the exercise could be pushed to sixteen minutes at a time. It was impossible with the naked eye to read the cicero character till the tenth day, when I used No. 10, having successively given

No. 3	one day.......	5	exercises	from	2	to	4	minutes.
" 3½	" "	7	"	"	8	"	10	"
" 4	half a day....	3	"	"	10	"	15	"
" 4½	" " .	5	"	for			15	"
" 5½	one day.......	6	"	"			16	"
" 6	two days.....	13	"	"			15	"
" 6½	half a day....	6	"	"			15	"
" 7	" "	6	"	"			15	"
" 8	" "	7	"	"			15	"

On the evening of the tenth day, the exercise could be continued for twenty-two minutes. She then saw the hour on the clock at seventy-five centimetres, and recognized persons at twice that distance. The glasses then given were of the following numbers:—

11th day of treatment,	....	No. 11.
12th " "	....	" 12.
13th " "	....	" 14.
14th " "	....	" 16.
15th " "	....	" 18.
16th " "	....	" 22.
17th " "	....	" 24.

At this time the exercise could be continued from 20 to 40 minutes; small text and even *mignon* type could be read without difficulty. For two months Madame de R. continued the use of No. 24, and also the use of the aloetics. For reading at twelve or fourteen inches, and for the observation of large objects placed at less than ten or fifteen yards, the vision of the left eye had become as good as that of the right. The restoration of sight is still perfect. I am now contented with prescribing gentle aperients at short intervals.

I have reported this case somewhat in detail, because it has made some noise in certain circles at Brussels, and because when I undertook the treatment, the state of the patient was known to M. Baud, one of our most distinguished physicians. The following cases, which I shall relate very briefly, are also remarkable.

Case II.—Last year. Professor Morel of Brussels, consulted me about Miss S., who perceived, a few days before, that she could not see with the right eye. It was impossible to ascertain the cause of this affection of the retina, which had probably existed for a long time without being discovered. Having used various energetic measures without the least appearance of success, I proposed the use of spectacles, to which M. Morel willingly consented. Miss S. could not recognize letters of the largest character. For two days she practiced in vain on double canon with No. 2½. A slight headache was produced at each sitting, which was removed by cooling applications to the forehead. We had some difficulty in inducing Miss S. to continue this treatment; at length she consented to try No. 2¼. At the third exercise she could distinguish many letters, and at the fifth she recognized them all, only she confounded *e* with *c* or *o*, *a* with *d*, and *m* with *n* or *h*. The next day the same letters were seen with the naked eye at two inches, and with No. 3 at 3 inches. Next day No. 5 was substituted for the last number, and after that the exercise was taken with the naked eye. In sixteen days the sight of the diseased eye was perfect, and it has remained excellent ever since.

CASE III.—Miss M., a dramatic artiste of the first order, had lost her sight by chlorotic amaurosis. She had been treated at Paris by M. Sichel, and at Brussels by M. Suetin, when I was called to attend her in consultation with M. Vottem, professor in the University of Liége. Suitable treatment had removed the chlorotic affection, and restored the sight of the left eye, but the right remained deprived of vision, notwithstanding the means used by M. Vottem, by myself, and while visiting La Haye and Amsterdam by M. Hendriksz. Beginning at No. 2½, with which she recognized here and there, some double canon letters, one month's exercise with the spectacles was enough to excite the power of vision. She pursued this treatment for five weeks, and on her return to Strasburg, I directed her to my friend Professor Stœber, who has been convinced of the reality of the cure. She then used No. 24, with which she read the smallest character. Miss M. is now prima donna of the Turin theatre, and her vision continues perfect.

I might give the history of eight or ten cases no less remarkable, and numerous cases of debility of the retina, the cause or consequence of strabismus. The cases just related are enough to show the effects which may be derived from glasses in the treatment of amaurosis. In another letter, I shall point out the evils to be avoided in this method of treatment, and shall at the same time mention the results which I have obtained in the treatment of myopia and presbyopia, in which I have for some time used the myopodiorthotikon of M. Berthold.

Note by the Translator.—Dr. Cunier expresses his acknowledgments to Professor Serre, of Montpellier, for his views of treating amaurosis by irritating the retina, a mode of cure which the latter was led to propose by operating on a patient for artificial pupil and on another for cataract, each with amaurosis of the opposite side, and observing that the sight of the amaurotic eye improved by the inflammation which followed the operation on the other. He recommends the introduction of a cataract needle to gently irritate (*titiller*) the lower portion of the retina in order to excite its sensibility. This method of treating amaurosis has some plausibility, from the good effects of various stimulating vapors, lotions and frictions upon the disease; but it must not be forgotten that in these cases, the introduction of an instrument into the eye, may be attended with serious consequences, as I have witnessed the most severe periodical inflammation to follow operations on cachectic eyes.

After an artificial pupil has been formed or an opaque lens has been removed, it sometimes happens that the patient can see very little more than before the operation, yet in time, some of these cases become completely restored, by permitting the organ to perform functions which had been prevented, in consequence of the obstruction to the light. Exciting the retina by means of spectacles as advised by Dr. Cunier will not be apt to produce the intense suffering that may follow the introduction of an instrument. When light is admitted to the eye, all the parts of the organ are immediately exercised; there is a nisus to cause the pupil to be contracted or expanded, a nisus to adjust the focus of the crystalline by the ciliary arrangement, and a nisus to adjust the fibres of the retina. The effect of belladonna when it produces even a very small degree of enlargement of a pupil contracted by previous iritis is often very remarkable, as it enables a patient who is all but blind to conduct himself accurately without a guide, and even to read the finest character. By looking intently at near objects the pupil will contract, and the reaction of the iris will probably enlarge the pupil to a greater extent than before. Many cases of amaurosis arise from disease of the fifth pair which adjusts all the internal parts of the organ, and when the impression of light is transmitted to the brain, there follows a reflex affection which exercises, or at least causes a nisus to exercise the parts which may be debilitated.

'Abortive Treatment' of Primary Syphilis.

We extract from the valuable lectures on syphilis by Mr. LANE, formerly House-Surgeon of the London Lock Hospital, the following remarks on the 'abortive treatment' of chancre, recommended and practised by M. RICORD, and of which Mr. MAYO also approves:—

> Supposing the abortive treatment to be determined upon, there remains the question, whether excision or destruction by escharotics should be preferred. The method by excision is not so extensively applicable as that by escharotics, and should be confined to cases where the skin on which the ulcer is situated is movable upon the parts underneath, and is easily isolated, as on the skin of the scrotum, on the prepuce, or even skin of the penis; upon the vascular texture of the glans it is not admissible. The curved scissors is a convenient instrument for the purpose; the scalpel, however, or bistoury, may be used, especially when it may be required to remove a piece of the whole thickness of the prepuce. Great precaution should be taken in performing this operation, that no particle of the virus from the sore should come in contact with the recently cut surfaces, for there is great risk of their becoming poisoned by the instrument used, by the fingers of the surgeon, by the linen of the patient, or by the skin of the neighboring parts, all of which are likely to be soiled by the secretion of the original sore; and the patient, after submitting to rather a painful operation, may find that instead of being radically cured of a much-dreaded disease, as he had been led to expect, he has unfortunately only exchanged a small chancre for one three or four times its magnitude. These considerations, and the greater amount of pain attendant on excision, induce me to advise you in all cases to prefer the destruction of the poisoned sore by escharotics. In the selection of a suitable escharotic you should take care to choose one easily manageable, and that is not likely to create much pain or inflammation, at the same time that it is effectual in destroying the contaminated structure. The lunar caustic or nitrate of silver, appears pre-eminently to possess these qualifications, and by common consent is the one preferred.
>
> In applying the nitrate of silver, the object should be to produce an eschar of sufficient depth to destroy the whole of the poisoned part. Where a small superficial ulcer is the form presented by the disease, as is more frequently the case in its first stage, this will be readily accomplished by penciling the surface and edge of the sore with the caustic pointed for the purpose, until the former has assumed a deep white-ash color, and the latter has become black. When a pustule or vesicle presents itself, it should be broken, and the cuticle removed: the ulcer, now exposed and cleared of secretion, should be treated as above described. Should a red point or pimple only be present, the caustic should be pressed upon the most prominent part of it, and made to turn upon its axis till the cuticle has given way, and the surface of the cutis underneath shows by its color that it has been fairly acted upon. Beyond the fourth or fifth day of insertion of the poison, as proved by artificial inoculation, the application of the caustic will generally require to be repeated on the disap-

pearance of the first eschar; but before this date, one application is usually sufficient to entirely arrest the disease. It is upon this ground principally that we may perhaps, in some doubtful cases, be warranted in following M. Ricord's advice, to test, by inoculation, on some other part of his body, the specific character of the disease under which the patient may labor, taking care to destroy the incipient syphilitic pustule, should that result from the experiment.

Many patients, I am convinced, would voluntarily submit to this experimental test, to have their mind set at rest with respect to the nature of their malady, when it was fully explained to them that the experiment would be attended with little or no pain, and that the commencing chancre artificially produced could with certainty be destroyed on or before the fifth day, and probably later, without the slightest chance of the constitution suffering from what had been done, while his medical adviser would have obtained important information for conducting the treatment. After the use of the caustic, a piece of dry lint, rather larger than the white eschar produced, should be applied, in order to protect the surrounding or opposed parts; and this is all that will be required when the sore is on the inner prepuce, or on that part of the glans which is covered by it; but in exposed situations the lint would become adherent to the edge of the ulcer, and cause pain and inconvenience on its removal, unless covered by some dressing which would prevent evaporation. A larger piece of lint soaked in a mild astringent lotion, and covered with a strip of oiled silk, or simply a piece of lint, upon which some mild unirritating ointment has been spread, will answer this purpose. Should any inflammation be present, or be anticipated, rest may be enjoined with the horizontal position, and the surrounding parts kept wet with Goulard lotion, or simple water, either in the form of poultice with bread, or by means of linen or lint dipped into them and laid over the parts. When the ulcer is seated on the prepuce, these local precautions are especially advisable, as a slight amount of inflammation is in this situation soon followed by serous effusion into the cellular tissue between the two layers of this membrane, and phymosis or paraphymosis would be quickly induced. The penis under these circumstances should be surrounded by the lotion, and supported against the abdomen. Low diet and saline aperients may also be required, or a more severe antiphlogistic treatment may be called for.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, September 3, 1842.

We are collecting materials for the publication of the 'Medical and Surgical Curiosities' of New York. These papers will excite many and mingled feelings. But they will do good. Curious and original prescriptions by some of our oldest and most distinguished physicians,—reports of novel and extraordinary surgical operations,—anecdotes illustrative of points of professional etiquette,—and so on, will form the subject of the forth-coming articles. Appropriate comments will be given, and salutary lessons enforced with all humility and good-nature. We will faithfully endeavor to observe the *sauviter in modo* whilst we exhibit the *fortiter in re*. The young members of the profession will be edified,—the public will be instructed,—the 'originals' will be tickled,—the world will be made wiser,—and the New York Lancet go on its way rejoicing.

The recent agitation, of the great question of a reform of our defective systems of medical education, has not been fruitless. A very important movement, for the purpose of reposing in independent Boards, the right of examining candidates for medical honors, and conferring degrees, has been commenced, or rather revived, in many regions of the country. And what is not a little remarkable, and gratifying too, as it augurs well for the success of the reformers, is the fact, that the movement has originated simultaneously in districts, far removed from each other, and has received the unsolicited and zealous aid of influential men, without any means having been taken to secure such wide-spread unity of purpose and of action.

In all the discussions of the question of medical reform, both in this country and in Europe, the evil influence exerted by monopolizing corporations and medical teachers, has been pointedly exposed, and condemned. And the leading principle in the most judicious schemes for reform, has implied the necessity of vesting the power of conferring degrees, in the hands of independent bodies, who would command the unlimited confidence of the profession, and the public; and to whom no such unworthy motives as those, which it is too well known, actuate in most cases, the conduct of interested corporations, could be attributed. It is perfectly well understood that almost universally the 'green-room examinations,' are a mere farce. Although every Professor may not exhibit the candor of the 'Phenomenon,' otherwise called Dr. Bedford, who so charitably alleviated the fears of the uninitiated students respecting the severity of the ordeal through which they were to pass before receiving their degrees, yet, the conduct of the majority of the teachers in our medical colleges is virtually the same.

But this change in the licensing power is not all that is required; nor is it all that is contemplated. Indeed, the necessity and importance of this change being admitted, then the propriety of making a material alteration in the mode of testing the eligibility of students who present themselves as candidates for examination is easily demonstrated. At present the period of time occupied in preparatory studies, and the number of class-tickets, are the grounds on which the candidate offers himself. But all that the Boards of Censors, whom we desire to see established, should require, on the part of the student, should be adequate professional qualification, no matter how, or where, or in what length of time, acquired.

We feel convinced that this is the only reform which can raise the character of the profession, and prevent the admission into it of unqualified men. The utter inefficiency of the present licensing powers, in the exclusion of ignorant and uneducated young men, is acknowledged. Graduation fees, and not the reputation of the profession and safety of the public, are the objects sought by the Colleges, and it is vain to look to them for reform.

In Kentucky the agitation of this business has been very energetically commenced. A State Medical Convention, composed of some of the most able and enlightened physicians of that region of our country, has been organized, and the efficient co-operation, ere long, of the State Legislature, is confidently anticipated. Dr. Duke, of Maysville, in a letter received by us a few days since, thus speaks:—

> 'The subject of 'medical reform,' upon which you have been engaged in the *Lancet*, has attracted much of my attention for some years back, and it has given me much pleasure to read your articles on the subject. An extension of the period of the lecture term is a most important matter; but I think the establishment of State Boards, to whom shall be attributed the entire power of conferring degrees separata from the schools, (from whom the privilege of graduating their pupils should be taken,) would be still another step. This Board, as in the Navy and Armay, would make their examinations searching and rigid, and would not be influenced by that love of money which almost alone influences the schools.'

We give insertion, in our present number, to a communication from one of the most intelligent and energetic physicians in this city, in which he enters into the detail of the proposed reform. It is to be hoped, that this subject will now be thoroughly investigated. The proposed plan is, at all events, truly democratic, and fully accords with the spirit of our free and liberal institutions. In our next, we shall resume this subject.

We wish to direct the particular attention of our readers to an article in our present number, relative to a very interesting association, organized sometime since, for the promotion of medico-chirurgical science. Its members are young, energetic, zealous, and entertain a most commendable desire to enlarge the boundaries of professional knowledge. The mode of operation adopted by this society, appears to us admirably adapted to effect the important objects contemplated. Indeed, the amount of practical information, which such an association might in a single year contribute to medical science, cannot possibly be over-estimated. Besides all this, the tie that binds the members together,—the love of truth, which is the *tessera* of genuine studentship,—must attract towards them the hearty sympathy of every honest heart. Most cordially do we wish these gentlemen success, and promise them our fraternal co-operation.

THE MEDICO-CHIRURGICAL REPORTER.

Sanative Influence of Malaria in Pulmonary Diseases.

TO THE EDITOR OF THE LANCET.

Sir:—

With all medical writers and inquirers, of the present day, it is a matter fully settled, that opinions in medicine must be substantiated by *facts*, otherwise, 'whatever may be the ingenuity of the opinion, it is not likely to obtain either permanent attention or consideration, and must perish in that oblivion which has buried so many medical theories.' It is by this test alone I would have the opinion tried which has been advanced in a former number of your valuable journal, in regard to the sanative influence of a malarious atmosphere upon tubercular consumption.

It has been established by incontrovertible facts, that there are many localities in our country where marsh exhalations abound which are entirely exempt from pulmonary consumption; while at the same time, in places bordering upon these, and similarly situated in all respects, except the absence of the paludal poison, consumption abounds among the inhabitants to an increased extent. Cases have, likewise, been submitted where individuals laboring under incipient phthisis, have been restored to health by removing from these consumptive regions to malarial districts; and, until these phenomena are in some way accounted for, it will not be so easy a matter to 'demonstrate the fallacy of this opinion.'

'The rarity and even complete absence of pulmonary consumption in certain localities,' says M. Baudin, 'is an incontestable fact, of which I shall not undertake the demonstration; but, if all physicians agree in recognizing it, it is still necessary that this remarkable phenomenon should be ascribed to its proper cause.' But while we advocate this doctrine—the preventive, and even remedial influence of a malarious atmosphere in tubercular phthisis, we agree entirely with Dr. Forry, who asserts the same thing that Dr. Morton has before him, in his work on Pulmonary Consumption; namely, that 'persons whose constitutions were broken up by incessant attacks of ague and fever, have died of rapidly developed phthisis.' This we believe, that consumption may supervene in constitutions which have been 'deteriorated by malarial diseases,' when exposed to the exciting causes of consumption. But this does not disprove the doctrine of the efficacy of a malarial atmosphere in tubercular phthisis, any more than the fact that the individual whose constitution has been shattered by repeated courses of mercury, is more liable to contract a venereal affection, when exposed, than a healthy person, proves that mercury is not a *specific* in syphilis. Nor does it prove that 'malaria has a tendency to develop consumption,' as Dr. Forry asserts. On the contrary, this assertion is disproved by the facts already established; namely, the complete absence of tubercular diseases in many places where marsh exhalations abound; and by the increasing frequency of the affection, in the surrounding country, as it becomes more healthful in respect to the marsh diseases, as is the case in numerous localities in our own country, and, as has been shown to be the fact, by M. Baudin, in relation to many places which have fallen under his bservation.

Still, we repeat, it is desirable to obtain further and more critical observations upon this subject, and it is to be hoped that those members of our profession who are located in the more recently settled parts of our country, where malarial diseases are prevalent, will aid in its further investigation. I remain, sir,

Respectfully yours,

Horace Green, M. D.

77 *White street*, *August* 31*st*, 1842.

Rupture of Pleuræ Pulmonalis in Tubercular Consumption.

TO THE EDITOR OF THE LANCET.

Sir :—

April 5th, 1839, I was called to visit George W. Spear, æt. 25; had been indisposed for the last six mouths with much pain in chest and shoulders, and a very harassing cough. On examination found him in the last stage of consumption, though able to sit up during the greater part of the day, and occasionally to walk out. Ordered a slight anodyne.

April 7th, was called again; found him in the following situation :—Unable to sit up; lying on the back; pulse 120; breathing much accelerated; fever high; thirst urgent. He remarked that the night previous, while in a violent fit of coughing, he felt something give way in his left side, and ever since he had been getting worse. On examining the chest, found it very much distended, which presented a striking contrast with its contracted state two days previously. The intercostal muscles were pushed out even with the ribs, and the abdominal muscles were also very tense. On percussion the lower parts of the chest gave a very empty sound, not much unlike that elicited by striking an empty bladder. The upper portion of the chest sounded uncommonly flat, which two days before was very resonant at certain points. When the ear was applied to the chest, the respiratory murmur could be heard only feebly at the upper portion. At the left side was occasionally heard a noise resembling a suppressed whistle.

8th.—Found him sinking rapidly; heat of skin very much reduced; dyspnœa very urgent, and pulse feeble. He died on the following day.

I stated my opinion of the case to my friend Dr. M., who assisted me in the post-mortem examination. On opening the chest the left cavity was found completely distended with air, which had not the least disagreeable odor. About a gill of serum was found in the cavity. The left lung was pressed into less than a third part the space which it naturally occupied, in the upper part of the cavity, and the right lung was very much flattened, both of them containing many tubercles and excavations. A very critical ocular examination was made for the supposed rupture, but without effect. The chest was then filled with water and the lungs inflated by the mouth, when bubbles of air were seen passing from the rupture to the surface of the water. The opening was situated in the fissure between the lobes of the left lung. It was large enough to admit a small probe. It appeared to extend about a line through partially disorganized pulmonary substance, and opened into an uncommonly large tubercular excavation.

The above case, though not at all instructive as to remedial means, may, nevertheless, assist in forming a correct prognosis in similar cases.

Yours, with much esteem,

Wm. Grey, M. D.

Lowell, Mass., *August* 26*th*, 1842.

Extraordinary Case.

TO THE EDITOR OF THE LANCET.

Sir :—

One of the most extraordinary cases I have ever heard of, occurred on Monday, and believing the narration worth a corner of the *Lancet*, I send it you. George Meade, æt. 5 years, son of Mr. John Meade, Manhattan Place, between Reade and Duane streets, about two years ago became suddenly very ill, and has continued so, with occasional remissions, since then till last Monday morning. General emaciation and febrile excitement, with great pain in the pyloric orifice of the stomach, were the prominent symptoms. Convulsions of from twenty to thirty minutes' duration frequently occurred. His parents tried physicians without number and without success, till despair induced them to give up all hope. The continual pain in the stomach gave them the idea that he had swallowed a pin, or something of the kind, which continued fixed, causing the trouble. So firmly were they persuaded of this, that, though full of the ordinary prejudices regarding post-mortem examinations, they resolved to have him opened after death to satisfy themselves of the truth of their conjectures. Last Sunday evening the child was unusually well and eat heartily of boiled crabs, which causing a slight diarrhœa, gave him a sudden desire for stool next morning. While there he complained of something falling down his thighs, and on rising, an animal slightly resembling a mouse, long snout, short body, and long, thin, veal-colored legs, and large hairs round the lips, was found moving in the fæces. It lived some time after this, but was killed finally. The child has been considerably better since. Any person may satisfy himself of the truth of this relation by calling at the above place, where the preparation and child may be seen, and his doubts removed. Yours,

John B. Newman.

58 *Essex street*, *August* 31*st*, 1842.

On the Employment of Cold Affusion in Acute Hydrocephalus.

BY DR. MUNCHMEYER, OF VERDEN.

Dr. Munchmeyer observes that the medical world is greatly divided in opinion as to the value of this remedy; some persons greatly extolling its efficacy, while others regard it as altogether useless. He considers it to be a most important remedy, and one which will often save life when all other means have been useless. One great reason why cold affusion has met with so few supporters is to be found in the misconception which has prevailed with reference to the proper time for using it. It is certainly not always advisable to resort to it, and it should never be forgotten that its mode of action differs essentially from that of cold when kept constantly applied to the head. In the employment of cold affusions, it is the secondary action of cold, as well as the sudden shock to the system produced by the mode of its application from which benefit is expected, while in the case of cold lotions to the head it is the primary action of cold which is obtained. Cold affusion then must be looked upon as a directly antiphlogistic remedy, nor is its employment indicated during the early inflammatory stages of hydrocephalus, but rather when affusion, the consequence of inflammatory action, has taken place, and a tendency to paralysis exists. After the subsidence of the violent symptoms of the disease, and when the patient has sunk into a comatose state, with a pale countenance occasionally suffused with a flush, dilated pupils, strabismus, and slow pulse, this remedy will frequently prove of excellent service.

In order, however, for benefit to be derived from it, it must be employed in an efficient manner. Dr. Munchmeyer directs that the patient should be taken out of bed, stripped of his clothes, and wrapped up in some simple covering, (if water-proof the better,) which leaves only his head exposed. He should then be placed in a sitting posture in a bath or tub, and the person who administers the affusion should mount on a chair and pour cold water upon his head, in a moderate stream from the height of five or six feet. This may be continued for a minute or two, and repeated twice or thrice. The patient should then be wrapped up in a warm sheet and placed in bed, where he should remain till it is thought proper again to have recourse to the remedy. At first, it will probably be requisite to repeat the affusion, in the course of an hour and a half or two hours; but as the patient improves the interval may be longer, so that at last it will not be necessary to employ it above two or three times daily.

The immediate effect of cold affusion is, that the patients awake from their comatose condition and begin to cry violently, which they continue to do so long as the water is poured upon them. They afterwards appear exhausted and pale, the skin is cool, the pulse small and very frequent. When placed in bed they usually fall into a dose, the pulse becomes more regular, and the warmth of the skin returns. By degrees, as with the repetition of the remedy the patients improve, they begin to have sound sleep, from which they awake in the possession of all their senses, recognize those by whom they are surrounded, and cease to squint. At the same time too, a sweat, frequently of a critical nature, breaks out upon the whole body, and during its continuance the employment of cold affusion is very hazardous. The patient's sleep becomes more refreshing, and the comatose condition recurs at longer intervals; he begins to notice what goes on around him, the head regains its natural temperature, and the febrile symptoms disappear. The employment of affusion must, however, still be continued for some days, since relapses very frequently occur.

The paper is illustrated by five cases. In three the employment of cold affusion was perfectly successful, in one it produced temporary amendment, and the death of the patient was to all appearance owing to the apathy of the parents, who neglected to persevere in the treatment, while in the fifth convulsions and death followed affusion while the patient was perspiring profusely.—*British and Foreign Medical Review.*

Infantile Convulsions Treated by Ice to the Spine.

BY R. B. TODD, M. D., F. R. S.

[We need not remind the practitioner how necessary it is to keep in view correct principles in the treatment of convulsions, which are symptoms of disease, and not the disease itself. It is particularly necessary to ascertain their cause. Convulsions cannot occur without some affection of the medulla oblongata, or spinal cord, direct or indirect. The irritation or disease may be either in the brain itself or in some remote part, as in the gums from teething, or in the bowels from a variety of causes. The child which gave rise to the following observations of Dr. Todd, was convulsed before admission into the hospital. When admitted, the following were the symptoms :—]

Total absence of consciousness; powerful convulsive twitchings of the flexor muscles of the right side, and also of the muscles of the face on the same side; internal squinting; pupils natural; respiration heaving and difficult; deglutition impossible; action of the heart very rapid. Such were the symptoms, they were symptoms of irritation, and the first inquiry of the medical man should be, What is the source of the irritation?

[The convulsions continued in spite of the usual treatment. The gums were freely lanced: the warm bath, a turpentine enema, cold to the head, leeches, &c., were in vain tried. Mr. Pincott, the resident assistant, then suggested the application of ice to the back of the neck and spine, 'with the view of calming, by the sedative agency of cold, the irritable state of that portion of the cerebro-spinal axis which he rightly judged to be affected, the medulla oblongata and spinalis.' The happiest results followed.]

Ice was applied in an ox-gullet along the course of the spine, extending from the occiput to the sacrum. Immediately on its application the breathing became easier, the child sighed several times, the pulse fell rapidly, and in ten minutes the convulsions had entirely ceased. Consciousness was not immediately restored, but as soon as the convulsions were over, the child fell into a sound sleep. Next morning the child was quite couscious, but irritable; he was freely purged with a little calomel and jalap, and left the hospital quite well on the fourth day from admission.

The result of this case was highly satisfactory, as affording a clear example of the good effects resulting from the sedative influence of cold. He would, however, impress upon them that an application thus made to the region of the irritated nervous centre was less likely to be useful, if the original irritant was not removed or diminished; and, therefore, it would not have been good practice to have applied the ice, unless the gums had been previously freely scarified, and means used to clear out the bowels.—*London Lancet.*

Artificial Sea Water.

The marked action which sea water exercises over many diseases, especially those of a scrofulous nature, depends not only on the salts of soda, lime, and magnesia, but also to a great extent on the organic principle furnished by the numerous plants and animals which it contains. It is necessary then, in forming artificial baths, to obtain a quantity of the different fuci, and concentrate their medicinal principles in the water. This may be done either by decocting the marine plants, or (which is much preferred by M. Vardo) exposing them to the slower action of the sun. By this means there is less danger of the organic principles beiug decomposed.—*Gazette Medicale.*

On Coffee as an Antidote in Poisoning by Morphia.

BY DR. B. FOSGATE.

To relieve himself of a severe attack of toothache, Dr. Fosgate swallowed in solution one and a quarter grain of the sulphate of morphia, equal to about seven and a half grains of solid opium. In about half an hour, a sensation of thickening and rigidity of the muscles of the back of the neck came on, and gradually extended itself to all the flexors of the limbs. In about five hours severe nausea succeeded, accompanied by efforts to vomit. Tea and sour cider increased the efforts to vomit so much that the stomach rejected fluids the moment they reached it, so that a second mouthful could not be swallowed before the first was ejected. Prostration of strength and apathy, with full slow pulse, and pricking sensation of the skin, were added to the other symptoms which were continually increased in severity, when the coffee was proposed. One gill of cold strong infusion of coffee was swallowed, and was retained about five minutes; the distressing symptoms, however, were by it abated, the nausea in part subsided, as was also the sensation of rigidity of the muscles; and the occasional repetition of this simple remedy during the course of the night completely removed all the distressing symptoms. Dr. Fosgate states, that, whilst suffering from the severe nausea, but previous to the exhibition of the coffee, his mind was depressed, and he felt considerable anxiety, no pleasurable sensations or reveries having been felt. But after the draughts of coffee, the depression of mind and all anxiety vanished, and there succeeded that exquisite revelling of the imagination so much sought after by the opium eater. This state continued for five or six hours, and was succeeded by sound sleep, on awaking from which he experienced a few hours of lassitude. The morphia had been taken after eighteen hours fasting.—*Edinb. Med. and Surg. Jour.*

THE COLLATERAL SCIENCES.

FUNCTION OF THE SPLEEN.[*]

The Spleen an Assistant Circulatory Organ.

BY JOHN JACKSON, ESQ., M. R. C. S. L.

We are, I think, justified in drawing the following inference, that only the velocity with which the blood is propelled through the hepatic veins can vary, while in the portal vein, *i. e.*, the portal trunk and branches, both the velocity and the quantity can vary. This leads to the further inference, that a regulating as well as a propelling power for the circulation is required. For the due performance of so important a function there should be an organ. And there is one,—an organ to which the real function has not hitherto been ascribed, and that organ is the spleen. It is the spleen which propels the portal blood through the portal trunk, branches, plexuses, and hepatic veins, to the inferior cava and auricle, and regulates the quantity and force with which it is propelled.

That such is the function of the spleen,—that it assists in the return of the venous blood,—and that it is therefore to be regarded as an assistant circulatory organ, will be attempted to be proved in the course of the succeeding pages: it may be well, however, to premise, that the opinion is grounded upon a consideration of the following circumstances:—

1. That for the reasons already specified, the *vis à tergo* of the heart's action appears to be inadequate duly to propel the blood through two venous and two capillary systems, and that an additional power is therefore required for its propulsion through the second venous and capillary system—the portal trunk, branches, plexuses, and hepatic veins.

2. That the spleen, by its structure, properties, and position,—and by its connection with the trunk of the portal system by the splenic vein, is eminently adapted for the performance of such function.

3. Because there is another organ, the function of which is analogous, and the texture of which bears the closest possible resemblance to that of the spleen.

4. Because much more venous blood is returned to the heart by the hepatic veins than there is arterial blood supplied to the digestive organs by the cæliac and mesenteric arteries.

5. Because the spleen is relatively much larger in man than in the quadruped; a greater power being needed for the propulsion of blood through a venous system, the direction of which is vertical, than through one the direction of which is horizontal.

The *vis à tergo* of the heart's action is not adequate *per se* to propel the blood through two venous and two capillary systems. Some additional power is necessarily required for its propulsion through the second venous and capillary system. We have, therefore, to consider the situation, structure, and properties of the spleen.

The spleen is situated in the posterior part of the left hypochondrium, between the great end of the stomach and the ninth, tenth, and eleventh ribs. It is completely invested by peritoneum, a duplicature of which proceeds from the stomach to the spleen, enclosing between its laminæ the splenic vessels. Under its peritoneal investment is a membranous and highly elastic capsule, from the inner surface of which numerous thread-like and also equally elastic prolongations proceed through the organ to its opposite side, and which by their frequent communications present a reticulated appearance. The spleen is composed entirely of vessels, and of these elastic prolongations from its capsule. It receives the splenic artery, the largest of the three divisions of the cæliac, and which divides into five or six branches before it penetrates the concave surface of the organ: the ultimate divisions of these branches of the splenic artery are arranged in tufts, and terminate in the great venous plexus, of which the chief bulk of the organ is composed, and from which the splenic vein originates. The veins forming this plexus are remarkable for their large size, tenuity, and extensibility, and for their free communications with each other in every possible direction, by numerous large lateral orifices: hence the cellular, spongy appearance of the cut surface of an inflated spleen, and its resemblance in texture to the corpora cavernosa penis. This similarity, together with the following circumstances, namely, that in the living animal the spleen varies considerably in size at different times, and that it becomes greatly distended when the splenic vein is compressed or tied, and quickly returns to its former dimensions when the compression is remitted or the ligature removed, has given rise to the observation, that in 'texture and phenomena the spleen bear so close resemblance to the erectile organs.' (Béclard.)

The splenic vein is nearly five times the size of the splenic artery, and is joined behind the pancreas by the great mesenteric vein, this junction forming the trunk of the vena portæ, the area of which is much less than the combined area of the two veins by which it is formed. The spleen is, therefore, connected by means of the splenic vein with the origin of the portal trunk; is placed at the very commencement of the second or additional venous system; is possessed of highly elastic and contractile properties; has no excretory duct; and is in man an organ of about one-sixth of the weight of the liver, and in quadrupeds, only one-twelfth, one-fourteenth, or even one-sixteenth.

Magendie, in his 'Précis Elémentaire de Physiologie,' vol. ii., p. 408, makes some observations, from which it appears that he was of opinion that the spleen, by its elasticity and peculiar contractile powers, assists in propelling the blood along the trunk and branches of the portal vein; but he would not have confined himself to this single observation had he been aware of the importance of his opinion, and had he not supposed that this was merely a subordinate and not its chief use; indeed, his using the expression 'the functions' is sufficient to prove that he did not regard the spleen as an assistant circulatory organ simply. The little importance which has been attached by others to this remark of Magendie's is shown in the fact, that it is passed over unnoticed in all the subsequent systematic treatises on physiology.

The resemblance of the spleen in 'texture and phenomena to the erectile organs' is certainly remarkable; but it has a stronger and more important resemblance to another organ, namely, the placenta, in structure, in properties, and also, as will be attempted to be proved, in function, and in disease, which it is singular should have hitherto escaped observation. Take a spleen in one hand, and a small and contracted placenta* in the other, and the outward similarity between the two will not fail forcibly to strike the observer. The circumference of both is more or less lobulated, or fissured; the spleen is enveloped by an elastic capsule—the placenta is enclosed between the two layers of an elastic membrane, the decidua; both organs present a spongy and reticulated texture, consisting almost wholly of vessels, and chiefly of veins; 'nervi lieni paucissimi sunt et minimi,' observes Haller; and the same remark is applicable to the placenta, in which, however, the existence of nerves is usually denied;† both organs are possessed of a peculiar contractile power.

---

[*] Extracts from 'An Inquiry into the Nature and Causes of Epilepsy; with the Function of the Spleen, and the Use of the Thyroid Body,' &c. By John Jackson, M. R. C. S. L., 10 Red Lion-square, London: Whittaker & Co. 1842. 8vo. pp. 107. 'In the following pages I have endeavored to show, not only that the spleen and the thyroid body are, each in its own way, subservient to the most important of all functions, namely, the circulation (our knowledge of which we have long erroneously believed perfect), but also that the disordered action of the former is capable of greatly deranging that function, and thereby of influencing the cerebro-spinal system, and thus of giving rise to certain morbid phenomena, for the production of which those who have looked exclusively to the nervous system have failed satisfactorily to account.' —*Extract from Preface.*

The similarity of the spleen and the placenta is most striking after they have undergone maceration, and their texture has been unravelled; they then present a cellular and flocculent appearance, and so close is their resemblance to each other, that if it were not for some difference in size and shape it would be difficult to distinguish between them.‡

Whether or not it be conceded that the spleen is the organ which subsequently to birth propels the blood through the portal plexuses and the hepatic veins to the inferior cava and right auricle, regulating its quantity, and also the force with which it is propelled, I presume there are none who will be disposed to deny that the placenta performs that function in the fœtus: and as before birth the umbilical vein conveys the blood in which is contained the *matériel* for the nutrition and growth of the fœtus, which blood is propelled by the placenta through the capillaries of the fœtal liver to the right auricle, so subsequently to birth the portal vein conveys the blood returning from the digestive tube diluted with the fluids taken up by venous absorption, and which is propelled through the portal plexuses and hepatic veins to the auricle by the spleen. To add another argument, therefore, to those which have already been adduced in support of the opinion that the *vis à tergo* is inadequate to propel the blood through two venous and two capillary systems, and that some additional power is necessarily required for its propulsion through the second system of venous and capillary vessels, it may be observed, that much more venous blood is returned to the heart by the hepatic veins, than there is arterial blood supplied to the digestive organs by the cæliac and mesenteric arteries. If, therefore, the spleen be not an assistant circulatory organ, the *vis à tergo*, per the cæliac and mesenteric arteries, propels not merely the blood which those arteries receive, through a single capillary and venous system, but also (notwithstanding the many disadvantages which have already been pointed out) propels with, and in addition to, that blood, all the fluid which enters the digestive tube by food or drink, through the second system of venous and capillary vessels; *i. e.*, through the portal trunk, branches, plexuses, and hepatic veins, to the inferior cava and auricle.

The ultimate divisions of the umbilical arteries terminate in the fœtal portion of the placenta in the venous plexus forming the umbilical vein, in like manner as the ultimate divisions of the splenic artery terminate in the venous plexus which forms the splenic vein; but in neither instance does the *vis à tergo* by these arteries afford any assistance in the propulsion of the blood through their corresponding veins. That the placenta, at least, is alone adequate to effect this propulsion, is proved by the circumstance of acephalous and other fœtal monsters being commonly acardiac.

Before birth the liver is large—very large in comparison with other organs, and the spleen is small, and its artery smaller than the hepatic; after birth the splenic artery becomes larger than the hepatic: if we bear in mind the inverted position of the fœtus in utero, and also the two terminations of the umbilical vein, we shall have no difficulty in understanding why the fœtal spleen is so small; its function of propelling the portal blood through the capillaries of the liver only commences after birth, that function before birth being performed by the placenta.

Having remarked the similarity in the external appearance and internal organization of the spleen and the placenta; that the latter and the umbilical vein perform previously to birth the function of the former and the portal vein; and that the spleen, and therefore the placenta, in texture and phenomena, bear a remarkable resemblance to the erectile organs, the most important of which is the penis; and having, moreover, observed that the spleen and the placenta, in addition to their elasticity, possess a peculiar contractile power, by which power both are enabled to propel the blood through the capillaries of the liver and the hepatic veins to the right auricle; we are now prepared to expect that this contractility alike possessed by each of these organs, the penis, spleen, and placenta, will be excited by the same agencies, whether of a moral or physical nature.

Fear, or fright, it has already been observed, is regarded as by far the most frequent exciting cause of epilepsy; and it is also a very powerful agent in exciting the contractility of these organs. No physiological remarks, it is presumed, will be needed to prove its influence upon the contractility of the penis.

[Mr. J. then makes some observations showing that fear is capable of exerting a similar influence upon the contractility both of the spleen and the placenta.]

Throughout the preceding pages the spleen is regarded as an organ attached to the trunk of the portal system, simply for the purpose of propelling the portal blood through the capillaries of the liver and the hepatic veins to the right auricle. It has also been attempted to show that the closest possible analogy exists between the spleen and the placenta, in structure, in properties, in function, and in disease; and that the latter even performs during fœtal life the function of the former,—teaching it as it were the duties which are to devolve upon it immediately after birth. Should it then be admitted that the above is the sole function of the spleen, can the placenta be justly viewed as anything more than an assistant circulatory organ, or temporary spleen? The placenta certainly propels the blood through the capillaries of the fœtal liver to the fœtal auricles. But is this all? does it effect no 'peculiar change,' neither in the blood which it receives from the mother by the uterine arteries, nor on that which is returned to it from the fœtus by the umbilical arteries? The blood supplied to the placenta by the uterine arteries, is deprived, before it arrives at the placenta, of certain solid materials which are deposited in the parietes of the uterus, and produce the increased development and growth of the organ which take place during utero-gestation. The uterus, therefore, receives a richer or more fibrinous blood than the placenta,—the fœtal portion of which receives a thin venous blood.[*] But does no other change take place in the blood in its progress from the uterus to the fœtal portion of the placenta, than that it is simply converted from arterial to a thin venous blood? What other change can take place? or what reason is there for supposing that either in its progress to, or upon its arrival in, the fœtal portion of the placenta, any peculiar change is required; or that the thin venous blood is not in every way adapted both for the secretion of the liquor amnii, and (after having passed through the capillaries of the fœtal liver) for the development and nutrition of the fœtus?

---

* When only one ligature is placed upon the umbilical cord before dividing the latter (as recommended by Smellie and Dewes), the placenta becomes emptied of its contents almost completely, partly by its own contractility and partly by the subsequent contractions of the uterus, and the consequent compression to which it is subjected in passing through the cervix and os uteri; it is then upon inspection only half, or even one-third, the size which it is when two ligatures are employed, and when consequently it is allowed to become gorged with blood, almost to rupture, previously to expulsion.

† 'Sir E. Home and M. Bauer believed they had detected nerves in the placenta by the aid of a strong magnifying power; and this is also the opinion of Chaussier.'—*Ramsbotham's Obstetric Medicine*, p. 91.

‡ There are two preparations of this kind in the museum of St. Bartholomew's Hospital, which display the remarkable similarity of texture of these two organs.

Nor is there any just ground for believing that the blood returned from the fœtus by the umbilical arteries requires any peculiar change to be effected in it by the placenta; or that any thing more takes place, than that it commingles with the thin venous blood in the placenta, with which it is sent back to the fœtus by the umbilical vein. It is merely the superfluous blood, or that which is not immediately required by the arteries in the process of developing the several fœtal organs: for we cannot entertain the opinion that it is deteriorated in quality, or that the blood passing through the hypogastric or umbilical arteries is at all different from that supplied to the lower extremities by the external iliacs; or from that propelled by the fœtal ventricles through the several ramifications of the aorta to every organ and texture in the fœtal system, in which a portion is deposited, and the remainder returned to the fœtal auricles.

ITEMS AND INTELLIGENCE.

Society for the Collection and Arrangement of Medical Statistics, and the Promotion of Medico-Chirurgical Science.

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

Allow me through the medium of your widely circulated journal, to call the attention of the profession to an association of the Alumni of the College of Physicians and Surgeons of the University of the State of New York; and in doing so, permit me to state concisely the object for which this association was formed, and the method proposed for effecting it.

The object is, the collection and classification of facts in medicine, and the redissemination of such facts when classified.

It is intended that the members scattered over the country, shall communicate to the officers any and all the important medical observations and cases with which they may meet in their practice; whether such observations or cases are isolated or in numbers.

It is the duty of a committee appointed for the purpose, and residing in New York, to classify and arrange the *matériel* thus collected, to select such cases as possess interest and importance, and thus prepared, to publish the transactions of the association, and transmit them to the members thereof, and the profession generally.

Another feature is this:—The committee will from time to time, by means of circular letters, ask the attention of all the members to certain specific subjects of inquiry; and in this way, have a number of men simultaneously investigating the same subject, and thus by extended and varied observation, gain the means of affording the best and fairest solution of such questions as present themselves for consideration. The committee will likewise transmit at once, to the distant members, such facts as are important enough to warrant instant dissemination, and at all times will stand ready to afford any information which their central position will enable them to give.

I will not here enter into a detailed consideration of the good which this association hopes to effect; but will ask, in the name of those I represent, the earnest co-operation of those who approve of our views, and are willing to join their prosecution in that spirit which comes of a love of truth.

Very truly yours,

M. GOLDSMITH, M. D.

12 *Walker street, N. Y., Aug.* 31*st*, 1842.

Reform of Medical Education.

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

The zeal with which you have advocated the cause of medical reform, must be my plea for claiming a place in your columns for the purpose of inviting the attention of the physicians throughout the State, to a plan which will in due time be submitted for their action. It is proposed—

1st. To vest the power of granting degrees in a commission appointed by a State Medical Convention.

2d. That the examiners be appointed in open convention, by *concours*, or some analogous test of qualification.

3d. That the Convention be composed of delegates elected by the County Medical Societies, the representation to be governed by the number of the members of each.

4th. That the examiners shall not be teachers.

5th. That all examinations shall be public, or that the examination shall be recorded.

6th. That if any other pre-requisite than qualification is necessary, the certificates of all legal practitioners be placed upon the same footing.

7th. That the examiners shall be paid by the State, and that the fees for graduation shall go into the State treasury.

8th. That the corporate institutions already in existence shall not be allowed to grant a diploma, conferring the degree of doctor of medicine, unless the candidate shall first have passed the examination of the State commission, when such candidate shall, at his own option, receive his degree directly from the State, or upon the evidence of the examiner's certificate, may take one from the college where he graduates. And,

9th. That hereafter all legal qualification for practice shall be based upon a satisfactory examination passed before this State commission.

The plan proposed is here presented, intentionally in mere outline; and it is to be hoped that those who feel the necessity for medical reform, will discuss this matter freely, and when we have all agreed upon the nature of such a bill as will meet the necessities of the profession, we will give it our cordial and united support.

REFORM.

A Short Discourse on Cliques.

Dean Swift has somewhere said that the world is our own acquaintance, and the Doctor (J. A. Smith) has improved upon the Dean, by presuming the world to be his own clique; and it is astonishing with what facility, he and others of moderate sense are made the dupes of their own vanity, by associating only with those, who as if by a kind of conventional argument, are pledged to make themselves great men; and for that purpose burn the incense of adulation under each other's nose. This city has long been controlled by a class of men of this description. For many years has its literary and scientific character been made to depend on the interested, but joint agencies of men possessed of small capital but indomitable industry in turning its amount to the best advantage; and so successful has been this species of speculation, that the reputation acquired by it is, with some honorable exceptions, almost the only celebrity which is within the grasp even of the industrious and talented aspirant. If he be not affiliated with some clique, or attempts to make his way without such aids, he must possess himself in patience, and address the reading rather than the listening public, who will not fail to make a just estimate of his merit, when time has been allowed them to form a judgment.

---

[*] Thus another interesting point of resemblance between the spleen and the placenta is in the kind of blood which each organ propels through the portal plexuses. In both instances it is a thin venous blood. That propelled by the spleen is diluted in the splenic and portal veins; and that propelled by the placenta, by having, previous to arriving at this organ, left a part of its solid constituents in the parietes of the uterus.

It is the influence of these mutual benefit companies which has nominated and elected the presidents, vice-presidents and actuaries of our literary societies for years; and it is this which now controls them. These are the associations which make great men out of small materials, and qualify lecturers on every branch of science without the labor of study. It is owing to agency like this, that one man may be at the same time, an anatomist, a physiologist, a metaphysician, a political economist, nay a *naturalist* or *geologist*; a president of one institution and vice-president of another, or indeed any thing as per order, and claim excellence in all! He is qualified by patent to teach any thing or every thing by turns, which his vanity, and a week's preparation may prompt him to attempt. Now to all this pretence, however ridiculous, there can be no serious objection, provided it be restricted within its own proper limits, and confined to subjects of mere taste or the fine arts, where mistakes have no serious consequence: but it is far otherwise in the various departments of medicine, where ignorance and error are liable to be attended with fatal results; here it is essential that the teacher be qualified by study and observation before he attempts to become an instructor; he has or ought to have higher aims than the mere pecuniary emoluments of his vocation, and when he has not, he disgraces the chair he occupies. —*Dr. Manley's Exposition, &c.*

Card from Professor Gilman.

The public will hardly expect that the persons attacked in Dr. Manley's pamphlet, should be at the trouble to contradict, in detail, all the misstatements it contains. It will probably suffice if they show, in one instance, the falsity of a charge, confidently made, and harshly commented on. This in a few words they proceed to do. On page 48 of the pamphlet it is asserted, that a Report to the Regents, in which the Faculty are spoken of in complimentary terms, was written by Drs. J. A. Smith, Parker, Gilman, and Watts; that the Trustees in whose name the Report was made, had no more to do with it than with the national treaty. Now by reference to the subjoined note from the Hon. Murray Hoffman, the gentleman who wrote the Report, it will appear that this assertion of Dr. Manley's is false in all its parts; that there is not and never was any, the slightest, foundation for it; that the gentlemen thus boldly traduced, never saw the Report till it was presented to and adopted by the Board of Trustees; in short, that the whole story is a *base fabrication*. This specimen of Dr. Manley's accuracy will render any reply to his other accusations unnecessary, and on the part of the gentlemen he attacks, both undignified and improper. The public will, probably, hereafter attach importance, rather to what Dr. Manley shall prove than to what he shall say.

TO THE EDITOR OF THE LANCET.

MR. EDITOR:—

In a pamphlet lately published by Dr. Manley, occurs the following passage:—'This abortive attempt to clothe the management of Dr. Smith & Co. with the character of a *Paris concours*, is pardonable compared with the pretension which marks the circular of the present year, in which the public are seriously assured that *it may be confidently declared that the Faculty are distinguished for a degree of talent, energy, and scientific acquisitions not surpassed in the United States.* This is extracted from the Report of the Regents of the University, but the above mentioned gentlemen,' (Drs. Smith, Gilman, Watts, and Parker,) 'although they give it as an extract, have forgotten to tell the public that they themselves wrote it! the Trustees having no more to do with it than with a national treaty.' The Report referred to is the regular Report of that year made by the Trustees of the College of Physicians and Surgeons to the Regents of the University. It is due to the gentlemen named by Dr. Manley, to clear them from a charge which implies such egregious vanity, and so much effrontery in indulging it. It is due also to the Trustees, to remove the possibility of an impression that they had lent their names and characters to authenticate a production with which they had no more to do than with the national treaty. I beg, therefore, to state the following facts:—

At a meeting of the Trustees, Dr. Delafield, Dr. Dering, and myself, were appointed a committee to prepare the Report in question. It was drawn by myself, submitted to the other members, approved by them with some slight variations, read at a meeting of the Trustees, adopted by all present, and directed to be transmitted as the Report of the Board. Neither the President, nor either of the Professors, knew one word of its contents before it was presented to the Board, or had any thing to do with its preparation, (except that each Professor was applied to, and furnished information as to the number of pupils and amounts received by him.)

Thus whatever Dr. Manley may find censurable in the document, must be charged to the committee who drew, and to the Trustees who deliberately adopted it.

Your obedient servant,

MURRAY HOFFMAN.

New York, August 30th, 1842.

To Correspondents.

Dr. HALL, of Montreal, writes us complaining of the sins of our proof-reader in the case of an article on the 'Diagnosis of Phthisis Pulmonalis,' which appeared in the sixth number of the present volume of our journal. An unusual press of business prevented us from reading the proof of the article in question, but in justice to the individual who did read it, we must say that the MS. is written in the most unintelligible style we have ever seen. Such a 'minnimi-pinnimi,' hieroglyphical scrawl it is, that we can scarcely decipher the letter containing the corrections of the typographical errors, of which the most important are these:—

Page 91, Line 9 from top, for 'a pressing,' read 'a purring.'
" " " 15 " " " 'hissing,' " 'trifling.'
" " " 28 " " " 'chiæ,' " 'striæ.'
" 92 " 33 " " " 'to the normal,' read 'to the abnormal.'

Bad as the Doctor's penmanship is, however, we will always be very happy to hear from him.

Dr. HALL, also complains, and so does Dr. DIVINE, of Poughkeepsie, that they do not receive the *Lancet* regularly. It appears, however, that they subscribed through agents not recognized by us, and so the fault lies not at our door. The same answer will serve in other quarters.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, SEPTEMBER 10, 1842. No. 11.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.
BY
JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons, New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XX. continued.

Self-limited Diseases—Treatment of Pneumonia—M. Bouillauds' and M. Louis' Mode of Treatment—Results—Comparative Merits—Treatment of the Pneumonia of Children.

GENTLEMEN:—

I will now speak of the treatment of pneumonia, but before doing so I will offer some remarks in relation to self-limited diseases. It has long been a known fact that certain inflammatory affections are self-limited—that the eruptive diseases are generally so—that is to say, that they run a certain course, which although it may be modified by appropriate treatment, yet cannot be much abridged. This is what we understand by self-limitation of disease. This idea has not, however, been sufficiently extended to inflammatory affections of internal organs, and the reason has been, because their stages have not until of recent years been accurately traced, nor the effect of treatment accurately observed. Now I think it will appear, that the same thing is true in pneumonia that is true in those eruptive diseases; auscultation and percussion having, as it were, brought these diseases to the surface of the body, and so enabling us to trace with precision their invasion, progress, and termination; the faculty of hearing being substituted for that of sight. But I would by no means maintain the idea that all cases of pneumonia would, if left to themselves, terminate exactly at the same period. This is by no means true. We have already seen that some cases terminate on the fourth, some on the seventh, and the majority on the fourteenth day, although all subjected to the same treatment, whilst some cases run on till a much longer period. But I think we can lay down, as a fixed principle, that in a given case of pneumonia, we cannot materially abridge the duration of the disease—not its violence or danger, recollect—but its duration. Now there are a variety of causes which operate in protracting a disease of this sort, the principal of them being the violence of the inflammation and its extent. If pneumonia attacks a patient with great violence, and spread over a large surface of the lung, there will be every reason to apprehend that the disease will be longer in duration than if it had been more limited in its extent. Again, if the disease attack a person whose constitution is exhausted, or vital powers enfeebled, and in whose case reaction will ensue much less readily, it will be of much longer duration than when it affects a healthy subject. So that all these circumstances, and others which I will not now mention, must be taken into account in estimating the duration of the disease.

The numerical method, of whose value you must be well aware, has been applied to the treatment of this affection, but so far as I have been able to satisfy myself, the attempt has entirely failed. It is by no means true that it can be applied to the treatment, as it can be to the general history and diagnosis of the disease. It is true we all form an opinion of the relative merits of various modes of treatment by the numerical method, and recommend with most confidence the remedies which are effectual in the greatest number of cases. I recollect a remark of M. Andral on this point, it was to this effect:—'Every case of disease is to be regarded as an individual one; there are peculiarities about it, which make it to differ from all other cases, and require a corresponding difference in the treatment,—a difference, it may indeed be, so slight that words cannot express it, and which can only be recognized by long-continued and accurate observation.'

These remarks appear to me eminently judicious, and in the application of the numerical method we should always recollect them. Thus if you would announce as a general rule to abstract four, or sixteen, or twenty ounces of blood, and attempt to apply it to every case, you would fail most signally. The truth is, the individual peculiarities of every case must be considered; still there can be no doubt that blood-letting is our main and essential remedy in the treatment of pneumonia, as it occurs in adults and healthy constitutions; but to attempt to lay down any general rule for its employment, must be regarded as utterly preposterous. The extent of the blood-letting must depend greatly on the vital powers of the patient, his previous habits of life, the violence of the disease, its stage, its extent,—all these circumstances are necessary to be taken into account, and therefore it is very unsafe to say in a given case, bleed a patient four, sixteen, twenty ounces. But bleed him according to the circumstances of the case. There is one rule which I mentioned when speaking of pericarditis, and it is so important that I will repeat it here; and that is, that in these acute inflammatory affections it is more judicious to bleed often, than at long intervals. This rule was laid down, or at least strongly insisted on, by Abercrombie in his excellent work on the 'Brain. He recommended bleeding at short intervals, and not delaying the repetition of the operation until reaction takes place and the symptoms recur with as much force as ever. But before the disease takes, as it were, a fresh start, you should bleed a second time, and follow up the bleeding two or three times, if necessary, in the course of the day. In this way you will not debilitate the patient so much, and in fact take away a much smaller quantity of blood than if you bled at longer intervals. It is to be understood that this applies only to those cases of active and violent inflammations which sometimes occur. It is very seldom, I believe, that pneumonia in this country requires such active treatment. One bleeding on occasion of your first visit, will, in most cases, be sufficient. It is seldom that it is necessary to bleed three or four times in the course of the first day, as in cases of pericarditis and peritonitis. Still cases do occur in which this very active depletion is indicated, and when so, it should be pursued in accordance with the rule I have described. It so happened that when in Paris four or five years ago, the active depletory treatment of pneumonia was at its height, and I had ample opportunities of observing its results. M. Bouillaud was the great advocate of the bleeding system, and he certainly bled his patients enormously. In France it was looked on as monstrous; and even here it would have been regarded as very active treatment indeed. M. Bouillaud was in the habit of bleeding his patients in the morning, cupping them during the day, and repeating the venesection at night; and continued this treatment, in some cases, for four or five days in succession, until the patients were as white as sheets and very much exhausted. M. Bouillaud contends in his work that he has succeeded, in a great many cases, in strangling the disease by this mode of treatment.

Louis and others pursued a different method of treatment, and bled very moderately. M. Louis very seldom bled his patients more than once, and sometimes not at all; and he considers that by this very trifling depletion, he cured his patients much more satisfactorily than if he had adopted the opposite plan. I certainly can bear testimony in favor of the treatment pursued by M. Louis. His cases done well, and were not marked by those striking symptoms of prostration and tedious convalescence which characterized the patients of M. Bouillaud.

Another celebrated physician at that time in Paris, M. Biett, since dead, thought he would try no treatment at all, if I may so express it, but merely regulate his patients' bowels and confine them to low diet, and he found that his cases done very well. His cases, to be sure, were by no means so numerous as those treated in the other hospital on the active depletory system, but he certainly established the fact that ordinary cases of pneumonia, if left altogether alone, and treated merely by rest, moderate diet, and regulation of the alvine discharges, will do very well. And this is certainly a very important practical fact, and shows that many inflammatory affections are cured less by the efforts of the physician than the powers of nature. Still I do not intend by any means to be regarded as the advocate of the 'do-nothing treatment' of pneumonia. But I think we may safely arrive at this satisfactory conclusion, that while we can diminish the violence of the disease by depletion, we do not materially shorten its duration.

It has appeared from very numerous statistical observations, that in the disease, if the patient be bled early, the duration of the disease is sometimes shortened, but still only in a very trifling degree; for the results of the very active depletion adopted on the Continent which I have just described, did not show that the disease could be absolutely cut short in its early stages. It does not follow, however, that depletion is not on this account to be neglected. An argument in favor of depletion in these cases is found in the fact which I stated yesterday. We know very well that depletion has the effect of reducing the frequency and fulness of the pulse, diminishing the heat of the skin, and activity of the circulation—in fact, reducing the febrile excitement. This is so well known as to require no comment. Now I yesterday gave you a law laid down by Louis, and represented it as well worthy of attention—that the danger of a fatal termination of pneumonia is in proportion to the febrile reaction. If by depletion we can succeed in keeping down the febrile action, we will then certainly diminish the danger of the secondary inflammation; and what is more, lessen, as I believe, the chances of suppuration. And this is assuredly of great importance, for while pneumonia can be readily cured during its first and second stages, we have no conclusive evidence to show that it has ever been cured after suppuration has ensued. We also guard against the pneumonia becoming double, for the affection of the second lung is almost always consecutive. This second inflammation is to be regarded as secondary, and the danger of its occurrence is in proportion to the intensity of the febrile action, so that in every point of view we see the propriety of depletion by blood-letting at the onset of this disease; and also during its progress under proper limitations, which cannot, I think, be questioned. As for the quantity of blood which should be abstracted, it is utterly impossible to lay down any general rule. We may say, however, that if the patient be plethoric, young, of healthy constitution, and laboring under the early stages of the disease, blood should be taken more freely than in cases of an opposite description. In connection with this general blood-letting it is frequently of great advantage to resort to local bleeding. In Europe, however, where local bleeding is much more generally practised than here, and where leeches are abundant and cheap, it is customary to employ local in conjunction with general bleeding. When describing M. Bouillaud's treatment of this disease, I remarked that he was in the habit of employing local bleeding between the intervals of the venesection. But, as a general rule, in this country, it is more judicious to defer the local bleeding until the patient has been depleted generally to the extent we think necessary, and then the local bleeding will have much greater effect. The action of the heart being reduced by the previous general depletion, the vessels will not so readily fill up after the topical bleeding. The extreme pain in the side will often be subdued by local bleeding, when local depletion may fail of producing that effect.

But are there any other remedies to which we may resort? I have already stated that many cases recover without any depletion, or very little, and I have no doubt that often cases of pneumonia would do very well if left without active treatment, still there are remedies which operate so powerfully and decidedly on the disease that we would be criminal indeed if we did not resort to their employment. And I think that experience has shown that the great remedy is the tartar emetic, first introduced in the treatment of this disease by an Italian physician named ———, in the beginning of the present century, but gained a great part of its reputation from the recommendation of Laennec, who employed it in his practice and spoke in the highest terms of its value. Indeed, I think we must be struck with the exaggeration in his description, and yet we cannot but believe that he distinctly recognized his cases of pneumonia. Yet the success of this remedy appeared to be much greater in the hands of Laennec at first, than subsequently. Still it has been proved most conclusively, I think, that the treatment of pneumonia by tartar emetic is the most successful and the most advisable—I have seen it so often operate like a charm that I have no hesitation in characterizing it as *the* remedy. The usual mode of exhibiting it, is in large doses. To a vigorous healthy adult of middle age, I generally give one grain every two hours, in a glass of mint-water, and repeat the dose according to circumstances. We notice that when administered in this way it produces vomiting, followed, in most cases by free purging. This state of things is continued from twenty-four to forty-eight hours.—Usually in three days 'tolerance' is fairly established, that is, the medicine is borne on the stomach perfectly well, and the patient experiences no particular sensation after taking it.

Now it would be difficult to say how the tartar emetic operates. It may be that the revulsive effect of vomiting and purging has some influence, but I am disposed to ascribe great virtue to its sedative effects. There can be no doubt that it very effectively diminishes the rapidity of the circulation and the intensity of the febrile excitement. Sometimes tartar emetic produces too much vomiting and purging; in such cases, by diminishing the dose and combining with it a portion of morphine, you will obviate the difficulty. Generally, however, I may here remark, the employment of opiates in these cases of active pneumonia is not admissible, particularly in the cases of children, because the opiate seems to diminish the quantity of the expectoration. Again, in some cases we do not find purging produced, and in these circumstances I have been in the habit of administering some Epsom salts in combination with the tartar emetic. Before tartar emetic was employed in the treatment of this disease, calomel was given in combination with opium;

and in delibitated habits, such as drunkards, and all cases where tartar emetic is contra-indicated, it may be advantageously given in that way. In treating children you must be very cautious indeed in the use of these remedies. In these cases active depletition is not essential. Blood may be taken from the arm and jugular vein, but in general I think that leeches are most advisable. The warm bath, used in connection with the leeching, is very proper. Some of our best practitioners are in the habit of administering calomel to children in pneumonia, especially in combination with antimonial powder, say a grain of calomel with two or three grains of James' powder, administered three or four times a day. There is no objection to this practice after depletion has been sufficiently employed. I need scarcely remind you of the necessity of extreme caution in the employment of tartar emetic in the cases of children, on account of the tendency to irritation and inflammation of the mucous membrane of the bowels. Opiates I have already said, are to be used with the greatest caution, on account of the tendency to coma which exists in most cases.

In treating the pneumonia of children, stimulants are frequently required. I do not refer to those cases in which the disease is itself chronic, as it often is in debilitated subjects, the victims of some antecedent disease, but those acute cases which were properly enough at first treated by antiphlogistic remedies. I believe it not unfrequently happens in these cases that the time comes when stimulants are required, and to let this time pass is to expose the child to great danger. How then are we to know this? If the child lies with a pale and but little heated surface—if the pulse, rapid and rather feeble, is getting irregular—if the respiration is unequal and sighing, then is the time for the administration of stimulants, and you may often give them wine, whey, and the like, with great freedom and with great benefit. Mark this irregularity of the pulse as an evidence of debility! It occurs in many acute diseases besides the pneumonia of children, and I hold it as mainly valuable as indicating the proper time for administering stimulants. If you watch such cases carefully, you will notice that the first approach to irregularity is very gradual; you would not notice it unless you compared the number of strokes of the pulse in a quarter for a succession of times, when you will find that the number varies. The next day the irregularity may be evident enough. The irregular sighing respiration is equally significant. Both these symptoms may, however, occur as evidences of real disease in the brain.

A very interesting question now arises, that is, in reference to the use of stimulants in pneumonia. If you observe the practice of physicians, in general, you will find some very fond of depletion, and pursuing the 'heroic practice;' others think very highly of the stimulating plan, and decry depletion. Both extremes are wrong, and should be avoided. There are, however, cases in which the stimulating system judiciously applied is indicated. I have seen a patient subjected to the active depletory plan of treatment, and remain for days in the same depressed state without improvement and without getting worse; and in such a case I have seen stimulants used with the best results. And there are cases again, in which the stimulating treatment is indicated from the very onset of the disease. To discriminate these cases, however, requires tact and judgment, to be acquired only by experience, and which it is impossible to communicate.

As to blisters, I do not believe that they are warranted in cases which after depletion are progressing to recovery, although they have often been applied in such cases. In some cases of tardy recovery they may be beneficially employed.

In relation to the warm bath, it is seldom that in private practice we can employ it, unless in the case of children, and then it is applicable, I need scarcely say, in almost every instance. I think that some attention should be paid to the manner in which the bath is employed. In the first place the room should be heated with a good fire, and blankets placed round the bath so as to screen the patient from the air; the temperature of the bath should be carefully regulated, and should be very little above that of the skin in a state or health; and then in removing the patient from the bath, great care should be taken to guard against exposure to cold.

During the convalescence of the patient, proper attention must of course be paid to the diet and regimen. But on that it is not necessary for me to dwell. I might indeed have entered at much greater length into the treatment of this affection, but I trust I have said enough to give you a clear idea of its principles.

REVIEW DEPARTMENT.

Introductory Lecture delivered before the Medical Class in Castleton Medical College, at the opening of the Fall Session, 1842. By David M. Reese, A. M., M. D., Professor of the Theory and Practice of Physic in said College; and Professor of the Institutes of Medicine and Medical Jurisprudence, in the Washington University, of Baltimore. Published by the Class. Castleton, Vt.: Robinson & Southmayd, Printers. 1842. 8vo. pp. 14.

A sensible and agreeably written discourse. Dr. Reese gives the following interesting details respecting the institution with which he is connected, and from which we are disposed to augur favorably of its prosperity and prospects:—

> The Castleton Medical College has now been in existence nearly a quarter of a century, and while more than two thousand students have attended lectures in this institution, upwards of 600 graduates have left it for the active duties of the profession, many of whom have reflected honor upon this their Alma Mater, by the eminence they have attained both as practitioners and teachers.
>
> By our recent organization of the present Faculty,—the improvement in our college building,—the purchase of the rich and extensive cabinet of anatomical and pathological preparations, now permanently placed in the adjacent museum; and the valuable additions made to the Chemical apparatus and cabinet of specimens in Natural History; we feel assured that our facilities for imparting instruction are unsurpassed in any of the northern and eastern colleges. By the employment of drawings, plates, models, and apparatus in all their variety, the several departments are illustrated, including the practical manipulations of the art, so far as they are capable of being demonstrated to the eye. Microscopic investigations in Physiology and Pathology, are conducted by the respective professors in presence of the class, and for cultivating practical anatomy every desirable facility is furnished. A weekly clinique is held for clinical instruction, affording opportunities for witnessing surgical diseases and their treatment, and some idea of the extent of the opportunities afforded may be formed from the fact that more than sixty of such patients have been operated on during the late term, in the anatomical theatre. The Professor of Ophthalmic Surgery has a rich variety of models, drawings and apparatus for his department, and at every clinique practical instruction is given by the treatment of the various diseases of the eye. While the numerous specimens in the cabinet of the Professor of Materia Medica are ample and extensive. In all these respects we challenge a comparison with rival schools, and are content to abide the issue.

We have no doubt that students will derive much profit from a visit to Castleton. By-the-bye, what have the Stuyvesant people done with the 'Phenomenon?'

I. *Compté Rendu des Seances de l'Académie des Sciences,* No. V. *Août,* 1841. (*Rapport fait à l'Académie des Sciences au nom de la Commission dite de la Gélatine.*) Paris, 1841. 4to. pp. 77.

Report made to the Academy of Sciences in Paris by the Gelatine Commission. Paris, 1841.

II. *Proceedings of the Philosophical Society of Glasgow.* (*Report of the Physiological Committee 'On the best means of providing cheap and nourishing food for the Poor.'*) Glasgow, 1842. 8vo. pp. 16.

Article First.

FROM THE BRITISH AND FOREIGN MEDICAL REVIEW.

One of the great obstacles to the discrimination of the nutritive properties of different kinds of food, appears to have been a distinction which has been insisted on by many between animal and vegetable matter. Yet if we compare vegetable and animal existence at their beginning, a very close analogy between them must force itself upon even a superficial observer. Both kinds of matter spring from seed; they are nourished by the media which surround them, and in all the relations of mere living beings their conditions are almost parallel. The vegetable kingdom, however, consists of species which are not endowed with the powers of locomotion, and hence we find their food is of a more elementary nature—carbonic acid, ammonia, water; while animals employ substances for their nourishment which are the products of the elaboration of these simpler elements. In this point of view, then, the assimilating apparatus of plants might be considered of a somewhat higher order than those of animals, just in proportion to the greater difficulty in the chemical operation of converting azote, carbon, hydrogen, oxygen, sulphur, and phosphorus into vegetable albumen, than of dissolving that substance in the animal stomach, and depositing it in another part of the body in the solid form of albumen or fibrin, with identically the same chemical composition, and similar or slightly modified physical properties. But further; vegetables are the incipient stage of animal existence, for plants are the only creators of living solids, if we may so speak; they serve to produce, from gases, the solids which, under the term of meat or muscle, we find in cattle in a modified form; so that the human body is purely of vegetable origin. This view has been amply confirmed by chemical analyses, which have demonstrated the identity in composition of the albumen of the pea, the curd of chese, and the albumen and fibrin of the blood. Henceforth, therefore, it would appear that instead of assuming an animal substance as the type of nutritive food, we must recur to the vegetable kingdom, and form our standard at the source of all organic matter.

These considerations prepare us for appreciating the justice of the views of those who have pointed to the amount of the azote of plants as the indication by which we are to measure the nutritive power of vegetable food. There can be no doubt that an attentive examination of this subject will bear us out in the conclusion that substances derived from the vegetable kingdom are nutritious in proportion to the quantity of azote which they possess. But our present knowledge does not permit us to say that such substances are *alone* endowed with nutritive power. Sugar is perhaps a striking instance in illustration of this exception. The familiar fact of the fattening of the negroes and even dogs during crop-time in the West Indies, would appear to negative such a position. Humboldt informs us also that he has frequently observed the mule drivers, who carried his luggage on the coast of Caraccas, giving the preference to unprepared sugar over fresh animal food. In both of these instanees, however, it is presumed, unprepared sugar, in other words, the juice of the sugar-cane, which might contain albumen and other matters, was employed; and even these were only used in conjunction with other articles of diet. Potatoes also are universally acknowledged to be far from the bottom of the nutrive scale; and yet the quantity of azote present in this vegetable is exceedingly insignificant compared with the amount which can be detected in even the inferior qualities of wheat. According to Proust, potatoes contain no gluten, nor has any subsequent investigator pointed out accurately the source of the azote which is unequivocally distinguishable in all varieties of this vegetable.

Boussingault, a French chemist, who is well known by his chemical researches in South America, has contributed much to the elucidation of the relative nutritive properties of vegetables. He has examined a variety of the common vegetables employed as human food in connection with the amount of azote which they contain, and has formed a theoretical table or scale, arranged according to the results of his experiments. He has compared the numbers which he has thus deduced with the practical experience of farmers in feeding cattle, and has detected a most remarkable coincidence between the theoretical and practical inferences. In the following table we have calculated the equivalents, so as to correspond with the vegetables employed in this country. It is read thus:—100 parts of white French beans are equivalent in nutritive power to 120 parts of yellow peas, to 1096 of potatoes, and to 2383 of turnips. A farmer, for example, in feeding cattle, would find that 120 parts of yellow peas would go as far in keeping up the strength and efficacy of his cattle as 2383 parts of turnips; for every one is familiar with the fact that a small portion of oats is sufficient for retaining the strength of a horse unimpaired; while if hay were employed for the same purpose, the amount by weight would require to be much increased:—

White French beans	100
Yellow peas	120
Farina of cabbage	148
" carrots	170
" wheat	175
Wheat	191
French wheat	193
Rye	200
Farina of barley	212
" potatoes	225
Barley	232
Indian corn	246
Potatoes	1096
Carrots	1351
White cabbage	1446
Turnips	2383

By an inspection of the preceding table we learn that those vegetables which contain gluten are the most nutritive bodies; while those substances which contain no appreciable quantity of this vegetable principle are comparatively low in the nutritive scale. Gluten is the substance procured from wheat flour, by digesting the latter in cold water and pressing it through a cloth. By careful washing, the whole of the starch is separated and nothing remains in the cloth but a tough adhesive mass, insoluble in water. To procure this perfectly free from starch is a difficult problem. However, we have found that if it is well washed under a stream of water, and then digested frequently in water, at the temperature of 120°, it may be procured tolerably pure. It should then be digested in alcohol. The latter takes up an oily matter which has been termed *proper gluten*, and leaves vegetable albumen. The quantity of proper gluten is very small, according to our trials. The great bulk, therefore, of what has hitherto been termed gluten is, in reality, albumen consisting of carbon, hydrogen, oxygen, azote, sulphur, and phosphorus, in nearly the same proportions as the casein or curd of milk, the fibrin of the blood, and the albumen of serum and of eggs.

We beg to draw attention to the fact, which has been noted in the preceding observations, viz. that vegetables are nutritive in proportion to the quantity of gluten which they contain; because it has been shown (Glasgow Report) that in the usual mode of baking bread by fermentation, a portion of this nutritive matter is destroyed in addition to much material which we have already found to be nutritive. In some chemical works, the quantity of gluten contained in flour is stated as high as 24 per cent.; and 18 per cent. is a common quotation. To put this statement to the test of experiment, we procured half a pound of the best Scotch flour, and treated it in the manner previously described. After separating all the starch, we exposed it to the heat of a vapor-bath until it ceased to lose weight. We found the quantity of gluten to amount to 6 per cent. of the original flour. This is a decided proof of the great inferiority of British flour compared with that of Italy and other continental countries. But it is further abundantly proved, by the impossibility of manufacturing British flour into maccaroni, a characteristic property of Italian flour, and which may be viewed as a test of the excellence or deterioration of flour. Those who have examined British maccaroni will at once admit this position; and persons who have been at the expense of preparing it, will still further be enabled to corroborate the accuracy of this statement. It would be very easy to show, if this were the proper place for such discussions, that the corn of this country never can cope in excellence with that grown in milder climates; and our statesmen might hence derive an argument in favor of the unrestricted importation of flour,—from the south, at least,—which could not well be controverted.

In order to form fermented bread, a certain quantity of flour and water is mixed together. Yeast is added to them, and the process of fermentation is allowed to proceed to a certain extent, when it is suddenly stopped by exposure to the powerful temperature of the baker's oven. Now it is necessary, in order to appreciate the nature of this process, that we should follow the yeast in its action. To two pounds of dough, the baker probably adds two teaspoonfuls of yeast. The yeast is a glutinous body, in a state of decomposition, which possesses the power of generating a similar action in sugar, when it comes in contact with that substance. The sugar is decomposed into alcohol and carbonic acid; while the yeast has increased in quantity, from two teaspoonfuls to probably double that quantity. This is obviously proved in the case of the use of leaven, which is quite analogous in its action to yeast. A minute portion of leaven is capable of communicating a decomposing action to a large mass of dough, and a minute part of the dough thus excited to fermentation will occasion a similar action in another mass of dough. It is clear, therefore, that the original mass of ferment has regenerated itself. Now, Liebig, from whom the chemistry of fermentation has received much elucidation, has shown that yeast or ferment, in order to reproduce itself, must act upon gluten; hence it is obvious that in the fermentation of bread, not only the sugar of the flour is acted on, but also the gluten or albuminous and nutritive principle is decomposed. The yeast, moreover, is apt to communicate an impairing flavor to bread, and in this point of view it has been viewed by several scientific men, who have proposed substitutes. Mr. Henry, of Manchester, recommended water impregnated with carbonic acid; and Dr. Colquhoun tried, with various success, to mix alkaline carbonates with acids in the bread, so as to imitate the action of yeast, without imparting to the bread its disagreeable taste. But we are not aware that any one has taken up the subject in an economical point of view, or in relation to the destructive influence of the yeast upon the nutritive matter.

The preceding considerations induced Dr. R. D. Thomson to turn his attention to the subject, and with the assistance of an intelligent baker in the borough, (Mr. Dodson,) he has been enabled to arrive at some interesting results. Mr. Dodson, who has introduced a highly palatable and very wholesome bread, which is raised by the action of muriatic acid upon carbonate of soda, at his request made an experiment upon a large scale, and found that by the fermenting process, a sack of flour would produce, on an average, a hundred loaves, while from the same quantity of flour, by the use of the acid and alkali, the return was 107 loaves; hence there is a loss of 6½ per cent. by the fermenting process; the deficiency depends upon the conversion of part of the sugar of the flour into alcohol and carbonic acid, also upon the destruction of part of the gluten or albuminous principle, by which means new yeast has been formed. (Glasgow Report.) In support of this view, the following reasons are adduced:—

According to a mean of eight analyses of wheat from different parts of Europe by Vauquelin, it appears that the quantity of sugar contained in flour amounts to 5·61 per cent. But the quantity lost by baking on the fermented plan, exceeds this number by one per cent. nearly. We are, therefore, necessarily compelled to ascribe this additional loss either to the starch or gluten of the flour. It is difficult to conceive any action which could destroy the starch unless it were first converted into sugar and then fermented; but chemistry does not enable us to suggest such a supposition, while the destruction of the gluten is forced upon us in order to enable us to account for the increase in the quantity of yeast. We conceive that the important fact of the loss of so much sugar and gluten in the production of bread deserves much careful attention. One fifteenth of the whole flour of this country used for the purposes of making fermented bread is blown to the winds. In an economical point of view its importance is paramount. This can be readily demonstrated by an application to figures, and the records of the night asylum for the houseless in one of our provincial towns affords a good illustration. The cost of bread for 1500 persons at that institution is £5 12*s.* 6*d.* If we deduct from this the fifteenth part, the sum will be reduced to £5 5*s.*, or there is a sum of 7*s.* 6*d.* over, which would purchase at 2½*d.* a pound 36 pounds of bread. This would supply 88 additional persons with 6½ ounces of bread, the usual allowance at dinner along with soup; or it would enable most of the 1500 to have a larger share. (Glasgow Report.)

With regard to the nutritive power of *sugar*, we have already referred to the condition of the negroes in the West Indies during the season of gathering the sugar crop, when sugar proves nutritive in conjunction with other kinds of food. Most persons are familiar with the experiments of Magendie, in which animals fed on sugar lived well for eight days, and then began to fall off, and ultimately died with all the symptoms of starvation. Starch, as the important constituent of flour, was given to animals by the members of the French Commission, of which Magendie was the reporter, and obviously the main instrument. In the pulverulent form, dogs would not even look at it. When made into a paste, with water, dogs rather than taste it preferred to die of starvation. Even when cooked with butter, lard, sugar, or bread, they refused generally to make use of it; and if some of them did partake of it for a certain time, they never failed to perish of starvation. *Gluten*, however, presented a remarkable contrast of both of the preceding substances. When obtained from wheat flour or from Indian corn, it presented a phenomenon which did not occur with any of the other immediate organic principles, all of which excite more or less repugnance in the animals to which they were presented. Gluten, whether with a faint odor or with a nauseous smell, was swallowed on the first day without difficulty by dogs, and they continued to make use of it for three months without any interruption. The quantity taken daily amounted to about four or five ounces, and the animals preserved all the characters of perfect health. Gluten, then, appears to present an anomaly; for all the immediate principles, such as fibrin, gelatine, albumen, &c., were never able, when taken *per se*, to contribute to the proper nourishment of animals. Instead, therefore, of depreciating the nutritive power of bread, and impairing its quality by the action of yeast, it would appear that the object ought to be to add more gluten to the flour when that principle is deficient in quantity.

Now, it appears that what was formerly termed *legumin*, or the albuminous principle in peas, exists in this vegetable to a considerable extent. The flour of peas might, therefore, be advantageously used to improve the quality of flour; split peas, ground to a fine powder, would probably be a more grateful addition. By the laboring classes peas-meal is much used, especially in Scotland; and, looking at the physical power of the inhabitants of that country, we should be inclined to conclude that the food which they use must be of a character eminently adapted to sustain strength. By the Scotch laborers, too, fermentation is not considered essential to the production of bread as it is by many who ought to know better. Panification and fermentation are terms which are frequently confounded together. Now nothing can be more obvious than that bread may be either fermented or unfermented, leavened or unleavened. Nor is it necessary for its digestion that bread should be fermented or decomposed, as the operation might be more aptly denominated. The Jew does not labor under indigestion when he has laid aside his leavened bread during the passover, and applied himself to his unleavened cakes. The same observation applies to the barley, peas, and oat-bread of the Scotch peasant, and also to the cakes of Upper India; for we believe that from Delhi to Cabool, the only kind of bread employed is wheat cakes, similar to what are termed *scones* in Scotland. Biscuits belong to the same category, and are even administered to invalids when other varieties of bread are considered unsusceptible of digestion. Bread, however, as we have seen, may be raised or rendered vesicular by chemical means, without having recourse to the decomposing process; and we doubt not that the means hitherto used for this purpose may be greatly improved, as soon as scientific care shall be bestowed upon this important branch of economy. We have already mentioned a variety of excellent bread baked with carbonate of soda and muriatic acid, now used to a considerable extent in London. We understand also, that Dr. R. D. Thomson, of Glasgow, has succeeded in making an excellent white bread by the employment of ammoniacal alum and sesquicarbonate of soda, which might be particularly recommended to invalids. The former salt consists of 1 atom sulphate of ammonia, 3 atoms sulphate of alumina, and 24 atoms of water. When sesquicarbonate of soda is acted on by this salt, the alumina is precipitated, and sulphate of soda and carbonate of ammonia (which is driven off) are generated, while free carbonic acid is evolved. The consequence is that the bread rises well, even better than that with soda and muriatic acid. The few grains of Glauber salt produced will either have no effect or a beneficial one, and when it is desirable to avoid the formation of even this minute quantity of the salt, instead of sesquicarbonate of soda, the sesquicarbonate of ammonia may be employed. The discharge of gas is slower than when a liquid acid is used; the consequence is that the process bears a more striking resemblance to the common operation of baking by fermentation, and the vesicular structure of the loaf is thus rendered more agreeable. (Glasgow Report.)

We have recommended the addition of peas to flour, on account of the large amount of albumen which the former contains. In the common pea the average quantity is about 18½ per cent.; kidney beans contain 18¼ per cent. The importance of these vegetables in a nutritive point of view is therefore highly worthy of attention. The objections commonly urged to it in consequence of its flatulent nature, may be overcome in a great measure, if not entirely, by digesting it in water at about the temperature of 100°, for several hours before it is used. In soups, for example, it might be used with great advantage to produce a body to that article of diet. Its employment is to be particularly recommended as a wholesome and nutritive ingredient in the food of the poor; and, as will be subsequently shown from the experiments of Magendie, it is greatly to be preferred to the gelatinous matter usually employed in the manufacture of soups. Cabbage, according to Boussingault, is a very nutritive substance, and when dried and reduced to flour it contains a very large quantity of azote.

Further Observations on the Variolæ Vaccinæ. By Mr. Robert Ceely, of Aylesbury. From the 'Transactions of the Provincial Medical and Surgical Association.' Volume X.

On Saturday, the 23d October, 1840, Mr. Ceely, along with Mr. Knight, of Brill, found on the hands of a patient, aged 56, who had never had small-pox or been vaccinated, in the village of Oakley, two miles from Brill, at the north-west end of the Vale of Aylesbury, and sixteen miles from the town of Aylesbury, two ruptured vaccine vesicles with their central sloughs, apparently about the third week of the disease. These vesicles, according to the statement of the patient himself, had been contracted from his own cows. Upon examining them, viz., eight milk-cows and two stirks, on two of the cows were the vestiges of from twenty-five to thirty vesicles on the teats, and the remains of one vesicle on the udder; on two others the remains of about thirteen or fifteen vesicles; and on a fifth cow a blackish brown oval crust. One of the stirks appeared to have black-brown partially adherent crusts on the teats; but as she was with calf she could not be carefully inspected. The other stirk had escaped the disease.

In another milker named Joseph Brookes, aged 17, who had neither had small-pox nor cow-pock, they recognized a distinct vaccine vesicle on the right temporo-frontal region, another over the last articulation of the thumb, and a third on the radial aspect of the ring-finger, all just past their acme.

It was the opinion of the proprietor, Pollard, that the cows had been infected from human small-pox effluvia, to which they had been exposed.

Small-pox had, in point of fact, been casually introduced into the village of Oakley about the beginning of the month of June; and though this was opposed by Mr. Knight with prompt vaccination, yet twelve cases of small-pox had occurred between June and October. Of these small-pox cases the last three were a woman aged 40, who had been satisfactorily inoculated in infancy by the celebrated inoculator Sutton, a young child, and a woman beyond the middle period of life. The two cottages in which these three patients resided during their illness were situate on each side of, and closely connected with, a long narrow close or meadow comprising scarcely two acres. The first mentioned patient, though thickly covered with pustules, was not confined to bed after the first appearance of the eruption, but frequently crossed the meadow to visit the other two patients, the woman and the child; the former of whom was in great danger with the confluent and malignant forms of the disease, and, indeed, died on Monday, the 7th September, and was buried the same evening.

Next day (the 8th September) the wearing apparel of the deceased, the bed clothes, bedding, &c. of both patients, were exposed for purification on the hedges bounding the close; the chaff of the child's bed was thrown into the ditch; and the flock of the deceased woman's bed was strewed on the grass within the close, where it was exposed and turned every night and for several hours during the day, till the 13th September, a space of eleven days.

On that day the eight milk-cows and the stirks were turned into the meadow to graze. For this purpose they entered it every morning, and were driven from it every afternoon to a distant meadow, to be there watered and milked, and to spend the night. Whenever the cows quitted the meadow in the afternoon, the infected articles above mentioned, which had been withdrawn while the animals were in the close, were again exposed on the hedges, and the flock of the bed was spread out and turned on the grass, where it remained till next morning, when the cows were re-admitted.

At this time the infected articles were understood to be withdrawn. It appears, however, that they were not always so punctually removed as had been enjoined; and both the proprietor and milkers affirm that, on one occasion, at least, they observed the flock bed on the grass and the cows amidst it, and licking it up.

At all events, while the animals were in perfect health on their first entering this close, viz., Sept. 13, within twelve or fourteen days after, five of the milk-cows appeared to be suffering under heat and tenderness of the teats, and imbedded on the skin were distinctly felt small hard pimples, which daily increased in size and tenderness, and in a week or two rose into blisters, and quickly after formed brown and blackish scabs. When the teats were swelled, occupied with blisters, and very tender, severe constitutional or febrile symptoms were observed; viz., sudden sinking or loss of milk, ptyalism and shivering, frequent inflation and retraction of the cheeks, staring of the coat, tucking up of the limbs, and sticking up of the back, and rapid loss of flesh. The process of milking was then very difficult, disagreeable, and even dangerous; and on the 14th of October, the middle of the third week, the detachment of the crusts and loose cuticle, and the abundant discharge of purulent matter on attempting to milk, compelled the milkers to desist for the purpose of washing their hands. Soon after this period the cows became quieter and more manageable, as the swelling, soreness, and tenderness of the teats subsided; and finally, milking was performed with comparative facility; and on the 23d October, the time of the visit of Mr. Ceely and Mr. Knight, scarcely did the operation give any trouble, though here and there a teat seemed still tender.

Such is the history of the mode in which the disease was believed to have originated among the cows.

It is unnecessary to detail the progress and phenomena of the disease as they appeared in the human subjects. It is sufficient to say, that these phenomena presented all the usual characters of the vaccine virus when transferred from the cow to the human frame. The febrile or constitutional symptoms in the elderly patient were slight and almost imperceptible; and, with the exception of the pain and tenderness from affection of the axillary glands, he sustained no inconvenience, and was not confined a single day to the house.

The younger patient, Joseph Brookes, suffered much more severely. He had not been the subject of previous small-pox or cow-pock. He commenced milking on Friday, the 9th of October, his duty being confined to four cows, only one of whom had the disease in the shape of from four to six vesicles on each teat. These four animals he continued to milk occasionally till the 18th October, ten days, having milked them in that period six times. He then felt stiffness and tenderness in the site of the cervical glands and lymphatics; and on the 20th, found on the fronto-temporal region a pimple which he could not resist scratching. On the 19th, a red pimple, the size of a pin's head, appeared on the finger, and next day a very small one on the thumb. In neither situation was he aware of the previous existence of any wound or abrasion. On the 21st came on headache, general uneasiness, and pains in the back and limbs, with tenderness and pain in the course of the corresponding lymphatic vessels and glands, especially of the arm-pit; and these increased till the 23d, when nausea and vomiting took place. The right eyelids became swelled, and closed the eye for one day; but after this he became better. He was unable to work, but never confined to the house.

From the vesicle on the fronto-temporal region, which was well formed, characteristic lymph was taken and immediately employed in vaccination. This lymph was perfectly limpid and very adhesive. The vesicles in thumb and finger were not touched, but were allowed to pursue their course without interruption or modification.

The lymph taken from the fronto-temporal vesicle was transferred in the usual manner to those of his younger brothers, a lad older than himself, and two infants. The primary symptoms in the brothers and the young man aged 19, which were manifest on the seventh day, were mild. After the formation of the areolæ, the secondary symptoms were promptly induced, increased gradually, and declined regularly. The vesicles presented nothing remarkable till the full development of the areolæ, when they became very broad and flat, spreading outwards, distended with lymph bursting their walls, and, like those from which they were derived, followed by sloughs and deep slow-healing ulcerations. In the infants, which were stout and healthy, with thick compact skins, the usual fretfulness and feverishness appeared on the evening of the sixth or seventh day, remitting in the morning and increasing in the evening, in proportion as the areolæ advanced, and declining with them. As usual, the vesicles presented nothing remarkable before the eighth day. In one the vesicles burst and sloughed; in the other they remained entire, leaving characteristic crusts and moderately deep fine reticulated cicatrices.

> 'In the subsequent transfers of the lymph the effects varied according to circumstances. In infants, with tense thick skins, the vesicles, though active, were perfectly free from inconvenience, yielding fine 'tamarind crusts' and regular scars. On children and adults, where the skin was thin, vascular, or irritable, upon the full expansion of the areolæ, the vesicles spread out broad and flat, and, yielding to the distending influence of their diluted contents, burst and terminated in sloughs, more or less deep, followed by a corresponding extent of ulceration; but where the skin was pale and thick, and especially if the patients were also pale and dark in complexion—conditions in every respect more suitable for the use of new lymph—then the vesicles were more compact, restricted, bold, and better defined, with proportionately less areola, and often not distinguishable at any period of their course from those induced by ordinary lymph. Here the crusts were of the ordinary size and form, and the cicatrices of the common depth and extent.
>
> 'The constitutional symptoms varied not less. In many infants the primary were scarcely noticed; the secondary, proportioned to the texture and vascularity of the parts, the local inflammation, and the temperament of the individual. In children, as usual, both were more frequently and more early noticed: the primary, on the sixth or seventh day; the secondary, at an early period, were marked with vomiting, diarrhœa, much fever, and occasional delirium. In adults the same early indications of constitutional symptoms, though not always, were often evinced; and during the secondary, as usual, much general complaint was made, some few keeping their beds a day or two. But the primary and secondary constitutional symptoms were comparatively mild in many individuals of the three classes above-mentioned.
>
> 'At the expiration of three months several patients were tested with variola, by inoculation, with no other than a trifling fugitive inflammation at the point of insertion, or a small vesicle resembling the modified vaccine in form, size, and course, containing a limpid, adhesive lymph, raised on an indurated base, and terminating on the eighth or ninth day in a small, hard, blackish-brown crust, and unattended throughout its course with any constitutional symptoms.' pp. 219–221.

The history now detailed seems quite conclusive in establishing the fact,—that the cows of Mr. Pollard had contracted a disease from exposure to the virus of small-pox in the human subject; that this disease was that known under the name of cow-pock, all the usual characters of which it presented; and that the lymph of the vesicles thus formed, when transferred to the human subject, gave rise to the usual phenomena of cow-pock inflammation and ulceration, with the consequent degree of immunity from, and tutorial power against the poison of small-pox. Some objection might perhaps be taken against these conclusions, from the circumstance that clothes and bedding are supposed by some to be not susceptible of being impregnated with the infection of morbid poisons, while there is not distinct specific matter contained in them, that is, that these articles cannot become *fomites*, unless they are actually imbued with small-pox matter. It seems, however, doubtful whether this can be regarded as a valid objection, especially if the articles which have been in contact with the persons of patients, have been so a sufficient time, and if the patients have presented the symptoms of the disease in a well-marked form. As to all other points, Mr. Ceely and Mr. Knight appear to have taken great pains to remove all doubt; and, so far as we can perceive, they seem to have succeeded perfectly.

> 'The proprietor of the animals alleged as reasons for this opinion, first, the fact of the state of perfect health in which the cows entered the close; secondly, the existence of variolous effluvia within its precincts; thirdly, the time which elapsed from the exposure of the cows to such influence and the appearance of the vaccine disease on them; and, fourthly, the simultaneous, or nearly simultaneous attack of all the patients. I need scarcely say that we spared no pains in our inquiries as to the validity of the statements in support of this opinion, and the accuracy of the facts upon which they were based. Hence the information here detailed was not deemed admissible till after thorough investigation and minute inquiry, by repeated personal visits to the scenes and the sources of it.
>
> 'There could be no doubt of the existence of variolous effluvia in the site and precincts of the close quite adequate to the propagation of the disease among human beings, had they been exposed; but whether sufficient to excite the vaccine in cows I really cannot pretend to say, having failed myself in attempts to infect two or three such animals at a time, with means not less potent, and under a closer atmosphere. The period at which the disease was stated to have been developed on the six animals was certainly remarkable, and called for careful scrutiny. The result of close and repeated inspections of all the cows, both at our first visit and several subsequent visits, was a conviction of the correctness of the alleged simultaneous occurrence of the disease on all the subjects at the time specified, a circumstance which increases the probability of the operation of one common cause. And here it is necessary to observe that, although the vaccine disease is sometimes epizoötic, and attacks one or two cows, at different farms, about the same time, I never remember to have seen so many cows simultaneously attacked in one farm as in this instance. Most frequently we find the disease break out on a single cow, and spread slowly, by direct contact of the hands of the milkers, through a dairy. It is also important to add that the vaccine was not then epizoötic in the vale or neighborhood, and of this fact I had the best possible assurance. The *aphtha epizoötica,* as the disease is called, was then prevailing, and my knowledge of the state of the dairies in general, both from daily inquiries and frequent personal inspection, for the purpose of observing the phenomena of that disease, was more perfect than it had been for at least twenty years; in fact, I had altogether despaired of seeing the vaccine disease for some length of time, in consequence of the existence of the epizoötic.' pp. 221–223.

Mr. Ceely then proceeds to advert to the validity of an opinion commonly entertained, that the stirk is not liable to the operation of the vaccine disease. Mr. Ceely having previously shown that, by inoculation, the disease may be communicated to the stirk, adduced also various reasons to explain the circumstance that it could not otherwise be detected in that animal, adds that in Germany, upon two or three occasions, it has been seen in the stirk, without probable contact, and that, from personal observation, both the stirk and the heifer are liable to a vesicular disease of the teats and udder, which is very common in the milk-cows in the neighborhood of Aylesbury. He seems at one time to have been in doubt whether this vesicular disease, to which he gives the name of the *verrucous* or *wart* vesicle, was the same as the vaccine, chiefly because the circumstances under which it occurred in these animals render it impossible to obtain a close inspection of the teats; but after examining the crusts and scars left by these vesicles some months afterwards, he says he could see no difference between them and the disease in the other cows.

From various facts also, Mr. Ceely infers that among cows, as among the human race, there are different degrees of susceptibility to the vaccine disease.

> 'I never recollect,' he says, 'to have seen a dairy visited by the disease in which two or three cows, equally exposed to casual infection, have not escaped. Moreover we know, by direct experiment, that some cows may be vaccinated or retro-vaccinated with facility; others with the greatest difficulty; some not at all. The phenomena of the disease were well described by the milkers. The primary or incursive symptoms so slight as scarcely to attract notice, as is most commonly the case; though in two instances—one some years since, the other more recently—there was considerable precursory indisposition. The heat and tenderness of the teats, with the presence of small hard pimples, deep in the skin, which gradually increased daily, with their inevitable and obvious concomitants, for more than a week before 'blistering' or acumination, were not less indicative of the vaccine than the correctness of the observers. At this period—the acme—they notice the constitutional symptoms, developed in all their intensity, and describe them with more than ordinary accuracy and precision; they certainly were more clearly marked than usual. Many contingencies, however, affect the development of the incursive and secondary symptoms; the chief are the season of the year and the actual condition of the animal, and the quantity and quality of food. The retraction and expansion of the cheeks is not always noticed by the careless unobserving milker; nor is the drivelling from the mouth. This last sign was so well marked that the proprietor feared the animals were about to be attacked by the *aphtha epizoötica,* (which was then prevailing in the adjoining farms,) where it is one of the first signs noticed, though not actually the first in existence, and depends on positive inflammation and vesication of different parts of the mucous membrane of the month. In the vaccine disease, however, this is not the case, at least here, where the disease is generally mild; for no vesicles are observed in the mouth, nor difficulty of mastication. The drivelling appears to be the effect of topical irritation in the seat of the disease—the teats and udder; for it is very well known that such a symptom does attend similar degrees of irritation from other causes and in other parts. The secondary constitutional symptoms were noticed in all the patients, including the stirk, and were proportioned in each to the amount of topical irritation. It was remarked, however, that the appetite seemed very little impaired, notwithstanding the wretched appearance of the animals, during the presence of the constitutional symptoms, and the sudden and notable loss of milk. To form some idea of the quantity of milk lost, we ascertained, from the dairy records, that in the first week of indisposition, six pounds of butter were deficient; in the second week, two pounds; in the third week, none. These may be deemed trivial and unimportant particulars, but their utility will be presently shown.' pp. 225–227.

The diagnosis of the true vaccine vesicles and ulcers in the cow is not always a matter of facility. The ulcers are said to be generally distinguishable by a rounded elevation, more or less manifest of their outer margins, and circumscribed induration more or less extensive at their base, with proportionate depression in the centres of deeper ulceration, sometimes caused by a slough. It is necessary, besides, to take into account the stage of the disease, the texture of the tissues, and the site of the ulcers.

It appears further, that cows are liable to certain eruptive diseases, which bear a close resemblance to the vaccine vesicle and ulcer. Thus a disorder termed by Mr. Ceely the epizoötic aphtha prevails in the vale of Aylesbury, and it was known that all the animals above-mentioned were attacked by this eruption on the 14th of November.

> 'This epizoötic seems to be a specific febrile eruptive disease, with catarrhal and rheumatic characters, comprising a cold, a hot, and a critical or eruptive stage. Its invasion is generally sudden. The cold stage is very short—a few hours—often unobserved; the stage of febrile reaction is quickly followed by patches of inflammation on the mucous membrane of the lips, gums, cheeks, tongue, and fauces, and about the nostrils and mouth, with congestion of the conjunctiva. These red patches, which are often overlooked or rarely observed, quickly run into irregular vesications or bullæ, containing a limpid pale amber-colored fluid, and are attended with profuse salivation, difficult and even temporary inability to masticate, with proportionate constitutional disturbance. Similar vesications are often seen on the teats, especially on the involutions of the skin at their apices, also on their bodies. Still more frequently they are seen on the skin where it joins the claws, as well as on the interdigical membrane, whence they often extend under the horn, creating much mischief and causing excruciating pain by its detachment, &c.; but all these parts are seldom equally affected in the same subject. The constitutional symptoms continue for four or five days, when the topical irritation abates, and mastication is restored. It attacks all ages, and is often suddenly fatal to the very young. In the milk-cow there is a notable diminution of milk, arising, in the first instance, from fever; secondly, inability to masticate—for the appetite soon returns or is not long absent; and, third, topical irritation. Now in the milk-cows at Oakley there was this manifest difference in the severity of the constitutional impression produced by this disease—the *aphtha epizoötica*—indicated by the greatly diminished secretion of milk; the quantity of butter lost in the first

week was thirteen pounds; in the second week, seven pounds. The suddenness of the invasion of the disease, as well as its severity, were demonstrated by the fact that on the morning of the 14th, the day of attack, the usual quantity of milk, (two bucket-fulls,) were obtained; but, in the evening of the same day, scarcely a quart. At this time the salivation, erection of the hair, tucking up of the limbs, &c., were obvious enough, though in the morning—an interval of eight or nine hours—no symptoms of illness were observable. The loss of flesh also was greater, and the animals were longer out of condition; but the season of the year was not without its influence in this respect, as well as in the restoration of the secretion of milk, which was then hopeless.' pp. 232-234.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, September 10, 1842.

We do not wish to tear down the schools, but to devise a plan by the operation of which those rights which are common to the entire profession, may not be entirely engrossed by the *few* to the manifest injury of the *many*.—*Circular Letter to the Physicians of Kentucky.*

This sentence presents our sentiments to the letter. In advocating the establishment of an independent and respectable Board of Examiners, we have no desire to injure the incorporated bodies which at present exercise the monopoly of conferring medical degrees. On the contrary, as every unprejudiced and reflecting mind must admit, we are seeking the advancement of the best interests of 'the schools.' Were qualification made the test of the right of admission to practice, and if the student were declared to be at liberty to select, as his preceptor, the most competent teacher within his reach, surely the necessary result must be an increased effort on the part of our Colleges to afford a substantial professional education? Such creatures as the 'Phenomenon' would then exclaim with the Moor—

'Othello's occupation's gone!'

An honorable rivalry would exist amongst all classes of teachers, whether public or private,—the standard of education would at once be elevated to its appropriate dignity,—an effectual barrier would be interposed against the admission of uneducated men into the ranks of the profession,—and the present race of physicians would be stimulated to study, in order to keep pace with the march of improvement, and discharge the honorable and responsible duties, which would devolve upon them, as the instructers of those who were to occupy the place of their successors.

But we really do believe, that the propriety and pressing necessity of the immediate adoption of measures, for carrying out this great movement for medical reform, must be so evident to all impartial members of the profession, that it is unnecessary to enforce them by further argument. On whom, we would ask, does the responbility of this great work, rest? On all the enlightened and liberal members of the profession, whether connected with existing corporations or not. We know that not a few of the most distinguished Professors in our schools are favorably disposed towards the contemplated reform. Let them nobly come forward as its open and energetic advocates. Let no narrow views of self-interest, prevent them from acting like right-hearted men. They may rest assured that the path of duty is, after all, the surest road to honor and stability. We wish this matter brought 'home to the bosom and business of every man,' who loves his profession for its own sake, and desires to see it efficiently serving as the instrument of the Infinite Benevolence.

Again, we call on the conductors of the medical press in this country, to come forward as the advocates of the measures, by which is sought, a new and better order of things. It does seem as if the time had come, for a great united effort to establish professional education on a reputable footing. The subject cannot be too much agitated. 'Through good report and through evil report,' we will pursue our course with respect to it. We know that we are sustained by some of the best men in the profession. True, we have been attacked in our individual character in consequence of our advocacy of the cause. But we are only the humble instrument of presenting the truth. That truth is invincible, however weak and obscure he may be who utters it. The man who says that a reform of medical education is necessary, may be as stupid as the 'Phenomenon,' and as ignorant as one of his rejected students, but is his assertion on that account to be regarded as untrue? If the New York Lancet be in error on the subject of medical education in this country, let the New York Lancet be exposed,—if it speak the truth, let that truth have its weight. Who cares whether the conductor of that journal be old or young,—educated or 'uneducated,'—'contemptible' or reputable? But the question is, does that journal advocate good measures,—does it seek the advancement of science,—does it labor to save the profession of medicine from degradation, and humanity from licensed ignorance?

We would not, we repeat, 'tear down' those noble and venerable institutions, which are associated in the memory of the profession with much that is good in medicine, but we would redeem them from the reproach of being mere grinding machines, where year after year are heard the same antiquated doctrines and theories, and in which, candor must confess, that the vested power to legalise the practice has been prostituted to the love of gain. No one who knows the internal management of medical colleges, will doubt that there is always kept in view the increase of the number of pupils, and consequently the emoluments of professorship, more than the soundness and originality of the men and their teachings. 'Tis true, that men of learning and ability, are sought out, and clothed with the honors of high places, if their reputation be extended enough to draw pupils; but what we complain of, is, that this ability to '*draw*,' is the primary and most important consideration in the choice. How many instances could be pointed out, in which mere personal popularity, and that sort of influence which can be brought to bear on the political welfare of the institution, are allowed to prevail to the exclusion of real merit! Let no one think that we speak of ideal evils. If he will but look at our colleges as they are, he will find abundant illustration of our remarks. While this is so, what is to be expected in the thorough teaching of medicine? What have our schools, with a few honorable exceptions, done as schools for the promotion of medicine? Teaching is, as Dr. Manley says, too much 'a trade,' and the dignity of science demands that the evil should be abated. In all kindness of feeling, let us assure the profession and its teachers, that that is the soundest policy, even in a professional point of view, which aims at public good. Let those who direct our public institutions, make qualification, thorough and efficient, tried by rigid test, the pre-requisite for degrees, and as the antecedent to this, let their whole energies be brought to bear in illustrating not only the theory but also the practice of physic and surgery, and they will have rallying around them, all the sympathies of those who have really the true interest of their profession at heart. But in our opinion, as things are, the only way of making qualification the basis of a legal ability to practice, is to divorce the office of teacher from that of the licensing power.

It affords us great satisfaction to direct the attention of our city readers to an announcement which appears in our advertising columns relative to the Reading-Room of the County Medical Society. We trust that none of the members will neglect to avail themselves of the very great advantages which are so satisfactorily afforded by this institution. The request of the Committee to be supplied with copies of Lectures, Circulars, Reports, and other documents of interest to the profession, will, it is to be hoped, meet that ready and extensive response which it deserves.

We have great satisfaction in being able to announce that an elaborate work from the pen of Dr. FORRY, will shortly be published by the Messrs. Harper. This work will be entitled 'The Physical Geography of the Earth, and its Relations to Organized and Living Beings, with Special Reference to the Climate of the United States.' We have observed with pleasure that the *London Literary Gazette* and the *Athenæum* have noticed Dr. FORRY's work on the 'Climate of the United States,' in terms of high commendation. This is only what we anticipated, and no more than the work deserves.

Constitution and Bye-Laws of the New Haven Medical Association. 1842.

We rejoice to learn from this document the gratifying intelligence that 'the physicians of New Haven are on better terms with each other, than [those] in any other city in the Union.' This fraternal love is ascribed to the genial influence of the 'Association' whose bye-laws are before us. We cannot avoid expressing our dislike of the 'Fee-table.' This turning the profession into a common trade, and teaching its members to drive a traffic in the sufferings of humanity, has been very instrumental in effecting its degradation. *Apropos* of degradation, where is the 'Phenomenon?'

The American in Egypt, with Rambles through Arabia Petræa and the Holy Land. By JAMES EWING COOLEY. With Plates. New York: D. Appleton & Co. 1842. 8vo. pp. 610.

This is, at all events, an amusing volume. Mr. COOLEY is as lively as Dr. MOTT is dull, and so our readers will readily conceive that he is lively enough in all conscience. The author's stock of accurate information respecting England and the English is somewhat limited, and the deficit is made up, in some instances, rather discreditably. Still, however, the foibles and faults in John Bull's character are tolerably well detected and exposed; and altogether we can testify that the volume before us is very readable. The typographical execution is beautiful. Talking of dulness, who can tell anything about the 'Phenomenon?'

The American Medical Library and Intelligencer. [Supplement.]

This supplement contains the plates illustrative of Dr. HOPE's admirable work. It appears that this periodical has ceased to exist. Is the 'Phenomenon' still alive?

THE MEDICO-CHIRURGICAL REPORTER.

Case of Extra-Uterine Pregnancy in which Gastrotomy was successfully performed.

BY MM. MATHIEU AND BRESSOLLES,
of the Hospital of La Charité sur Loire.

This case has given rise to disputes between MM. Mathieu and Bressolles, as to the share which each had in the performance of the operation. But, leaving these matters, and the opinions which M. Mathieu has expressed, apparently on insufficient grounds with respect to the membranes of the fœtus, the following particulars of the case may be of interest:—

The woman was thirty-eight years old, and had given birth to three children by her first husband. After his death she married again, but three years had passed without any sign of pregnancy, when at the commencement of January, 1835, the flow of the menses became extremely scanty, and on the following month ceased altogether. The woman experienced other symptoms of pregnancy, the abdomen enlarged, and about the middle of June the movements of the child became perceptible, and continued at intervals till the beginning of November. Pains like those of labor then came on, the patient experienced a sensation as of some violent tremulous motion of the fœtus, followed by three smart shocks, after which all movements ceased, and she supposed that the child had died.

During the three weeks preceding this occurrence the patient had suffered severe pains, which led her to think the labor was coming on. Several midwives and some medical men were sent for, who coincided in the opinion that the case was one of extra-uterine pregnancy; and the latter, according to M. Bressolles, suggested the performance of gastrotomy, to which, however, the husband would not consent.

During the next six months, the patient's condition grew more and more intolerable. She had frequent attacks of colic; vomiting, usually of a bilious fluid, and obstinate constipation, which could be relieved only by frequently repeated injections. She could obtain no rest, was subject to a constant fever, fainted often, was much distressed by the sensation of something rolling about in her abdomen; and latterly, ascites and œdema of the extremities had supervened. Some of the more alarming of these symptoms subsided, but the patient still suffered much pain, and became daily more and more emaciated, which circumstances induced her to apply at the hospital.

At the time of her admission the abdomen was so much distended by fluid that it was necessary to perform paracentesis, in order to ascertain the patient's real condition. It was then placed beyond all doubt that a fœtus was contained in the abdomen, that its head was situated in the hypogastric region, while the feet could be felt at the other side. Besides this a tumor was felt in the epigastrium which pushed the xiphoid cartilage forward, but the nature of this growth it was not possible to determine.

On the 27th of August, 1836, fifteen days after the patient's admission into the hospital, M. Mathieu proceeded to the operation, by making an incision from the umbilicus to the pubes in order to remove the child, which was about nineteen inches long, and had undergone no change, except the separation of a little hair from the temples. The hand was next introduced to remove the placenta, which adhered to the right iliac fossa, but it was not found possible to abstract more than a few portions of it. The incision was now enlarged upwards, and M. Bressolles, who had removed the placenta, detached the epigastric tumor by means of a pair of curved scissors. It was found to be attached to the diaphragm close to its insertion into the sternum; it was of an oval form, as large as the head of a fœtus at the sixth month, and quite free from all connection with the stomach. Its parietes were cartilaginous; it contained steatomatous matter and hair, and a small portion of bone, which M. Mathieu describes as resembling a fœtal bone, though the existence of any such similarity is totally denied by M. Bressolles.

The edges of the wound were brought together by suture, and a pledget of lint placed at its lower angle to facilitate the escape of any purulent matters from the abdomen. The patient recovered without a single bad symptom; the very copious purulent secretion from the abdominal cavity was the most remarkable feature in her convalescence. When she left the hospital a small fistulous opening existed at the lower part of the wound, but when the patient was seen again on June 20th, 1837, this had closed, and was succeeded by another close under the umbilicus. At this time her health was good; she had gained flesh, and could rest in any posture, though she experienced a dull pain in the right iliac region whenever she stood or walked. There was no hardness in the epigastric region, and the abdomen generally was soft.

Menstruation had occurred for the first time after the operation on May 1, and had reappeared on the 1st of June.

MM. Capuron and Gerdy, in their report on the case to the Academy of Medicine, have collected thirty-three other observations of extra-uterine pregnancy, to which we refer the reader. We cannot conceal our regret that the details of so interesting an observation should be disfigured by the squabbles of men who might have been expected to carry into the exercise of their profession higher motives than those of a vulgar and selfish appetite for distinction.—*Bulletin de l'Académie Royale de Médicine.*

THE COLLATERAL SCIENCES.

On the Secretion of Tubercle.

BY THOMAS HODGSON WATTS, M. D.

[One of the most interesting papers which we have lately perused, is this by Dr. Watts, on the above subject. We will endeavor to give an analysis of some of its contents, but cannot pretend to do it full justice in the short space which we can bestow upon it. It is acknowledged that there is a strong analogy between the secretion, from the vascular system, of a morbid matter, and a healthy secretion: and although there are many phenomena which are dissimilar, the process of healthy secretion will in some measure guide us to a true knowledge of the secretion of tubercle.]

The first solid compound of vital affinity beyond the boundary of health, is coagulable lymph, which follows in straight succession on the effusion of serosity; and in ordinary circumstances pus is the second. It is between the one and other of the two, that tubercle seems deservedly to occupy a place. The morbid preparation is, to appearance, nearly the same for all of them; and the secretion of each respectively may go on simply from the mass yet in circulation, or be attended with ultimate congestion of blood of a permanent kind. But beyond this they differ widely. The globule of pus is an orbicular membrane, full of a more fluid matter; organizable lymph puts on the cellular and fibrous arrangement; and tubercle, with all its points of resemblance to the former in the early periods, and to coagulated albumen, and particles of fibrine in the later periods, gradually changes from a fluid to a solid friable mass, only to soften again with the solution of the texture it occupies, resolving into globular bodies of considerable consistence, and sufficiently characteristic. When secreted, so like the product of plasticity, and fully formed, resembling much that of suppuration—it yet attains to neither. It goes progressively through the course of generating, maturing, and softening tubercle; the ultimate symptom of scrofula.

[As it is known that every cachexia disposes to various disease and inflammation, so we know that tubercle has a particular relationship to its peculiar cachexia, and that a peculiar habit of body is necessary to its production : and as syphilis and scrofula have each their favorite localities, so has tubercle in some measure its particular localities, as for example, the lymphatic system, or the lungs and mucous membrane, or the serous cavities and joints. The appearances in tubercle, as seen by a microscope magnifying 500 fold, are as follows :—]

In the maturer form of yellow matter, it presents the most satisfactory appearances. When compressed between the object glasses with a drop of water, it bruises with more or less facility, assuming a milky look, and a part of it composed of globular fragments mixes with the fluid. The entire mass appears granular in the microscope, and of a light sienna color. The borders are irregular, jagged, and broken, and many projecting fragments, about to separate themselves, are apparently attached to it by softer and more elastic matter, resembling in some measure a connecting tissue. This is not unlike what we have seen uniting the particles of fibrinous substance, which joins the fibres of muscle previously boiled. At an earlier stage, this softer material of union is less remarkable, because of the greater homogeneity of the morbid matter. When, however, it approaches towards softening, the connecting tissue grows more elastic and apparent, but to disappear ultimately in leaving innumerable globular bodies.

These are the gum-like globules described by us in a preceding essay, and they resemble broken portions of a friable mass. They have some features in common with broken morsels of fibrine well cooked. The chemical reactions also are almost alike. They vary in volume from minute particles to morsels as large as, and larger than the globules of pus. Frequently two, three, four, or more of them, closely united, mix with the rest. They are all transparent ; some of them have a uniform or smooth surface, others have a rougher broken appearance, and a good many present black points not unlike those of the globules of pus.

The normal fibrine of the healthy body, and of coagulable lymph, bears in it a vital property of organization, into fibre, tissue, and vessel. But the globular bodies of tubercle go on progressively completing themselves, even at the cost of neighboring organic textures, which ultimately soften and dissolve.

The gradual transition of tubercular secretion into concreted tubercle, and finally into yellow matter, and the globular mass of softening, is highly interesting to the speculative inquirer into disease. It seems that tubercle when formed by secretion, must pass through a progressive alteration of aspect ; and this is perhaps effected by a gradual change of its integral composition. This change follows in all probability in obedience to laws similar to those of catalysis familiar to the chemist.

However, it is scarcely possible to prove positively the transition of tubercular secretion into yellow matter, and mature tubercle ; but a strong case of reason can be made out in support of it. We see tubercle in every variety of condition from newly eliminated secretion, to gray, white, yellow, and soft matter ; and it is not too much to believe that it may go through these forms in gradual progression, to what is clearly its terminal state. It is, beyond a doubt, yellow tubercle is not formed at once, but requires an interval of some time for entire development. This period is of variable duration, but probably always longer, the more purely has been its origin in secretion. The alteration of appearance must be considerable and manifold in the maturation of tubercle ; and as the simple way of estimating them, we should regard the many varieties of tubercular matter, as representing faithfully the successive steps of this interesting change.

To seek a satisfactory explanation of the transition of tubercular secretion into the yellow globular mass, would be a vain endeavor ; but we may make curious observations enough, which render it familiar and comprehensible. If we steep a gray granulation of comparatively recent formation in distilled water, its transparency is lost to appearance, and, becoming blanched, it resembles outwardly one of older date, or grayish-white tubercle. The ultimate composition, however, is not altered in equal measure. Again, a portion of firm tubercle kept during hot weather in water occasionally renewed, softens and approaches nearer to the quality of yellow matter. It is compressed more readily by the object glasses, and separates into globular fragments, like those of softening matters in cavities. They are not, however, wholly identical, being analagous, but not perfect in the entire of their characters. Modifications such as these, of which tubercle is susceptible in so short an interval by management of its physical relations, leave us to comprehend those others of tubercular transition which are only perfected after some time in a laboratory, such as the diseased organ of the living body. It is, however, impossible to accomplish the several steps of tubercular transition by any composition of physical means, in so far as our experience goes.

Elsewhere we have sought to prove that tubercle forms by secretion, and also not seldom by direct conversion of blood permanently coagulated in the vessel. Secreted tubercle is, however, its general form, while the transition from coagulation happens, when tuberculization goes on in common with accidental disease. We have already enumerated some of the powers which, in our opinion, are engaged in the function of secretion, and return again to this interesting inquiry. There are four powers at work more especially in the secretion of tubercle, which eliminate it from the blood, and these are the tuberculizing affinities of the capillary, its power of imbibition, the force impelling onwards the fluids in circulation, and, fourthly, the formation of tubercle without the vessel.

The power that elaborates tubercle from the blood belongs to the capillary, and we conceive it to be nothing short of a morbid alteration of these affinities, by which vitality forms the varied secretions of health, but in particular those of nutrition. The chief elements of animal matter are fibrine, gelatine, and albumen, how various soever may be the organic forms they assume. Coagulated lymph is one of the simpler products of morbid changes, and preserves enough of organizable properties to become tissue, fibre, and vessel. Tubercle is a farther alteration of disease, and although of analogous parentage, is not thus organizable ; and pus is still more remote. Lymph is produced by the first of the series of deviations of the vital affinities from the normal order of health, which eliminate fibrine for secretion from the blood. Fibrine is required almost every where in nutrition ; and likewise, the exudation of lymph is nearly as general, although accidental in its site. The affinities of tubercular composition are another variety of morbid changes like those of fibrine, but so very complete and remote, and preserving so little of the usual organizing properties as to be in no manner fit to prepare an organic matter of equal character. However a very slight tendency still remains with it for a cellular arrangement, seen in the quantity of adhesive matter which binds intimately together the mass of globular concretions in mature tubercle. Were we to give a scale of degrees of morbid alteration in these cases relatively to one another and to healthful function, we would regard the forces forming coagulable lymph in the proportion of two, tubercle three, and pus four ; these figures would represent the deviations from health of the vital affinities which eliminate fibrine from the circulation for the various purposes of the economy.

Measuring, therefore, the series of changes in the case of three such common morbid alterations of the vitality, we compare them to the process of healthful nutrition estimated as one.

We look upon the capillary as a little laboratory of secretion, whether for nutrition or excretion, or the lubrification of tissues and membranes. But it is the laboratory of vital affinity, and notwithstanding we cannot appreciate the peculiarities of the vitality productive of substances of such various aspects, still its power is evident in what it produces. This power of collecting the elements of secretion, conveniently placed in the capillary, is the first cause of this important function. It eliminates them from a mass where many influences are at work, and, forming them into the material proper to the locality, attracts the secretion in embryo to the vascular wall, a position both favorable and necessary for its passage outwards. If it were not so, even if we could suppose the secretions already in the blood, they could neither be separated pure from the vessels, nor on their proper sites, unless a suitable mechanism of the capillaries provided for its evacuation, as various as the material to be voided. But no provisions either of a mechanical or purely physical nature can possibly answer these purposes. They are accomplished by several means, and the vital affinities form the hinge of the whole.

The power of imbibition of the capillaries is most useful in secretion. To perform this function a vessel is requisite, which can assist exudation outward of blood, and balance the impulse of the circulation. The globular constitution of the blood, making it a mass of solid but elastic particles, that cannot escape except through an opening of proportionate size, and, on the other hand, the uniform and compact membrane of the capillary devoid of perceptible pores, answer those purposes admirably. The preservation of the blood within the vessel, securing thus far its proper circulation, brings the material of secretion and nutrition to every point where the vital affinities, according to local peculiarities, perform the part of a laboratory. The capillary affinities attracting the matter of secretion on to the vascular wall, bring it into most suitable circumstances to pass outwards. It is at this period that a membrane imbibing as readily as the capillary, is of indispensible value, sufficing to imbibe moisture, to preserve every fibre and tissue soft, humid, and supple; it must now, of necessity, take up the secretion special to the locality and already attached to the capillary. An imbibing membrane, even without visible pores, assures a passage to secretions in the state of fluid, and enables the power propelling the circulating mass to aid efficiently in their evacuation from the vascular apparatus. Wherever passage is given to fluid by imbibition simply, there also it may be expressed, and the escape of it may be increased by any force we apply short of rupturing. When the vital preparation is complete for secretion, and the embryo liquor besmears the interior of the capillary, and this has imbibed it through, then secretion may go on easily. An outlet once formed, it is afterwards voided with facility outwards by the pressure of the column of circulating fluids, and it is nothing impossible that the capillaries accommodate themselves more, by degrees, to the passage and evacuation of a morbid production, its elimination becoming more like healthy secretion. This is seen in the dryness of a newly inflamed membrane, which, even when quite bloodshot, requires some interval to prepare for morbid secretion, that at length flows freely and in plenty. Besides, old constitutional evacuations proceed at length so calmly as to resemble very much the secretions of healthy organs. The mechanism of secretion becomes so perfect in the part as to afford equal facility for morbid deposition, as that of the liver does for the evacuation of its bile.

[No doubt the propelling force of the circulation is an important aid to secretion, and so likewise is the distended state of the capillary. By these means its tissue becomes, as it were, stretched and more open, so as to permit the egress of its contents.]

The earliest form of tubercle, in an uncombined state, met with in the corpse is the gray granulation when newly deposited. This body is secreted as a somewhat clear fluid, which, increasing gradually in consistence, concretes into a tough, and lastly, friable mass. The most recent examples of it we have seen were minute grayish bodies, like grains of millet seed, scattered throughout the spleen of tuberculous infants. They were about the consistence of gluten of grain. If we inquire farther what may have been their appearance at an earlier period, a fair means of settling the question will, perhaps, be to refer to the vesicles of scrofulous ophthalmia, which are not seldom followed by condylomatous growths, resembling much punctiform tubercle.

Originally, therefore, they are of a glutinous fluid nature, more or less consistent, which only becomes firmly solid in process of time. Probably also the same quality of thing is secreted, when the deposition of tubercle befals larger portions of the frame, and when infiltration takes place into the substance of any part, or from a secreting surface. Once having attained the exterior of the capillaries by means of other conspiring powers of secretion, it loses partially the fluidity, which characterized it as liquor of secretion, whilst passing through the vital laboratory of the vessels.

[And the very circumstance of the tubercular matter becoming concreted, leaves the outer surface of the vessel more free for the egress of fresh matter, which would not be the case, were the liquor of secretion to be always smeared over the capillary; and, moreover, this concretion prevents the ready absorption of the matter into the circulation. The absorption of tubercle, however, without a previous chemical change, is not easily conceivable, and it is probable, that if this ever does occur, it is only in its recent state.]—*Dublin Journal of Medical Science.*

ITEMS AND INTELLIGENCE.

Replication of Dr. Manley to the Card published in our last number by Dr. Gilman.

TO THE EDITOR OF THE LANCET.

Sir:—

I regret the necessity of defending any of the facts of my Exposition, against unmannered attacks from any quarter; but as Dr. Gilman has either volunteered, or been constrained to become an assailant, in place of recommending him to read La Fontaine's fable of Le Singe et le Chat, and dismissing both him and his subject, as I believe would have been the better plan, I proceed to answer it, the leading inducement being the Vice-Chancellor's letter.

Dr. Gilman says that 'the public will hardly expect that the persons attacked in Dr. Manley's pamphlet, should be at the trouble to contradict all the misstatements it contains. It will *probably suffice* if they show in *one instance*, the falsity of a charge, confidently made, and harshly commented on.' Which in a few words they, speaking by Dr. G., proceed to do. I have said on the last page of my Exposition, that Drs. Smith, Watts, Parker, and Gilman, did forget to tell the public, that they wrote the outrageous compliment paid to themselves, in the last College circular; and from the letter of the Hon. the Vice-Chancellor, it would seem that I was mistaken; I say *it would seem*, for although I am literally wrong, I claim to be substantially right; it is not therefore a base fabrication, in the genteel phraseology of the *Concours* professor, and thus I show it. By the way, before I begin, it may be as well to make my respects to Dr. G. for the compliment, although unintentional, which he pays to me in his card : he travels through it, even to the last page, before he finds any thing to quarrel with in point of fact or inference, although it confessedly contains grave matters which ought to interest him particularly ; the *Concours* for example. What a rich comment on professional moral! I stated the circumstance inferentially ; and I had a right to do so, inasmuch as reports of the condition of a medical college are presumed to emanate from a medical commission : I knew that the president himself had written such papers ; that they had been passed upon by trustees, and had been transmitted to the regents : I know that without the notes furnished by the teachers, such reports are nullities, and insult the board to whom they are addressed ; I had a right therefore to conclude, that as three of the professors were ignorant of the contents of this last one, the other four who are closely associated, were fully informed ; and besides, I had seen in one of the numbers of the medical gazette, which Dr. Gilman controlled, language very near akin to that which appears in the circular : furthermore I thought, perhaps without sufficient warrant, that if the above sentence had been written by any other than themselves, they would have resented it as the language of sarcasm. These were the reasons which prompted me to assign to them the credit of writing it. I never could have anticipated that Mr. Murray Hoffman, who had been connected with the institution but ten months, and who had not met with the board more than three times when this report was presented, could have been the author, and for his account I regret it. Mr. Hoffman appeared at the board of trustees for the first time March 20th, 1841, ten persons only being present ; and the first act he was called to do, was to recommend Dr. Gilman, his brother-in-law, for professor,—it was done. January 4th, 1842, he is present for the second time, and Dr. John Augustine Smith, as president, appointed him with Drs. Delafield and Dering, the committee to draw up the annual report to the regents, he of course the chairman. January 11th, being the third time, he presents the report of the committee, which he says he drew up *per se*, and no other person than himself is responsible for the draught ; without doubt all this is true, but it certainly could not have been anticipated. It is a little strange, that he, with two associates who are physicians, should have drawn the report without their assistance. He says in this report, '*that it may be confidently declared that the Faculty are distinguished for a degree of talent, energy, and scientific acquisitions not surpassed in the United States*,' and this is addressed to Regents! If this is a fact, upon what foundation does it rest? If an inference, where are the premises whence it is derived? If it is his individual opinion, prompted by kindly feeling, of which I have no doubt, whence does he derive the right to impose his private opinions upon a board as truths, in the belief that courtesy will not permit them to be contradicted? He may plead precedents, 'tis true, by the hundred ; but after all is said, all such attempts to forestall public opinion, are *frauds practised on public credulity*. But now turn to the *base fabrication* : does it resemble falsehood more than truth? let the reader judge. Did the professors mentioned, who drew up the circular, repudiate the nauseous sweet? No, no, they swallowed it, and licked the spoon! they appropriated it ; published several thousand copies in a little sheet for distribution ; and printed it in that *distinguished* journal known as the New York Medical Gazette, of which the *Concours* professor was the editor. By the way, it was among the last things published in that journal : it died soon after, peradventure from a surfeit! The simple truth of the matter is, that they *only* did not write it, but they approved and sanctioned it. Dr. John Augustine Smith, one of the four professors, *after deliberation*, as the Vice-Chancellor says, passed upon it, and with his signature it was sent to the regents : when they wrote their circular, they used that which they knew did not belong to them, and like Richard 3d, consoled themselves with the reflection, that if the trustees would 'buckle honors on their back,' they must needs wear them : *qui facit per alium, facit per se*, and how much the trustees had to do with it I have already shown. The whole story may be written in the compass of a shilling ; Mr. Hoffman wrote the report ; the trustees adopted it, and transmit it to regents ; they in their report to the legislature insert this as an extract ; and thus, by this simple process, the opinion of a single individual is made to appear the deliberate sense of two distinct literary institutions, one of which, in this State at least, is the acknowledged fountain of academic honors! I am not sensible that I have committed any other than a technical error, and am disposed to contest even that ; the Vice-Chancellor's letter, and the conduct of those who published the circular prove it, at most, nothing more ; and I am of opinion that if he had followed the practice of his own court, and sent the case to a Master to ascertain the facts before he wrote his letter, he would have dismissed the application. Dr. Gilman, in his card, says, this specimen of Dr. Manley's accuracy, the technical error, 'will render any reply to his other accusations unnecessary, and on the part of the gentlemen he attacks *undignified and improper*.' I cannot but admire the prudence and the calculation which marks this passage : character such as I have exhibited is like the Sibyl's wisdom ; the less there is of it, the more valuable ; and when demand exceeds supply, there is great prudence in husbanding a remainder left after a profuse expenditure. With Dr. Gilman I have no controversy ; but he is of age, and if he allows himself to be made the instrument of Dr. Smith and others, he ought to calculate his wages before he commences his work. My feelings towards him were always kind 'till he claimed to be the choice by *Concours* ; and my concern is now, that the constitutional malady of Dr. Smith has become contagious ; his close associates ought to be counselled to measures calculated to prevent the spread of the infection.

Jamer R. Manley

New York, September 8th, 1842.

Anatomy Amongst Painters.

A knowledge of anatomy lays the only true foundation of success in the higher grades of pictorial art and sculpture. The biographer of Sir Joshua Reynolds has well observed, that pre-eminence in the higher walks of art is based upon skill in drawing the human figure, with an accurate knowledge of its anatomy. This great painter's youth—the season when this skill and knowledge are best, if not alone acquired—was permitted to pass without his attaining a qualification so essential ; and in consequence of this neglect, he never had professional strength to execute works requiring great power of the hand over form, without exposing his deficiency. 'In his finest productions, possessing all the splendor of color, and all the breadth and charm of general effect, imbecility in drawing is manifest, and he was obliged to have recourse to contrivance to conceal, or slightly to pass over, that which he could not express.' All the zeal, and all the genius of this great man, it would thus appear, could not atone for the one great error of his professional education. How great a boon it is for the young aspirant of the present day to know that such need not be his case, and that, indeed, this qualification, so essential, is in a measure forced upon him.

In this, the highest walk of art, none have reached such excellence as Raphael and Michael Angelo Buonarotti ; the former having attained the greater measure of success, because in his loftiest flights still in accordance with nature. 'All that imagination could lend to a strictly imitative art he has added, yet has infused into its creations the warmest sensibilities of life; to nature he has given all that grace and fancy can bestow, consistent with the sweetest of all charms, leaving her nature still.'

To the grat Buonarotti no one will deny the merit of having carried ideal design to the loftiest pitch of daring. But whether the matchless intrepidity of his creations may not have seduced his imitators into sins of extravagance and exaggeration, may well be matter of controversy. Some votaries may have been consumed by the fire of the same altar, which shed only its light and warmth upon more favored worshippers. With his mighty genius, with his great experience and enthusiasm in art, and with his intimate knowledge of the anatomy of the human frame (for let not that be forgotten as one of the foremost of the qualifications of this great master), he could not only venture to approach the verge of propriety, but occasionally to disport himself on the other side. While contemplating his wondrous creations, the spectator quails beneath their grandeur—he trembles as he adores; and although he acknowledges the commanding power of the mighty Tuscan, he still languishes for nature. In his earlier works, before the thirst for epic grandeur had taken undivided possession of his soul, we find that his conceptions are less overcharged, and harmonize better with the truth of nature. Hence they commend themselves more warmly to our sympathies. Take, for example, the 'Dead Christ.' And who is there, rapt in this mysterious scene, that does not feel, that it is because the Son of God is here faithfully represented as suffering man, that our souls are touched with the softest and holiest emotion?

But let us not, in avoiding one danger, run rashly on another. There are extremes in art as in other matters. Excess of the ideal is one. Servile adherence to individual nature is another.

I need hardly remind you, that it is this humble imitation of actual nature in all its details, that lowers the character of the Flemish and Dutch schools, in other respects replete with most skilful artists; and it is this which has exposed their greatest masters to such criticism as the following:—'Rubens, after spouting Virgil with enthusiasm, turned to his canvass, and painted a Flemish butcher with bandy legs for Æneas; and gave Dutch Helens, Flemish Junos, and German Diomeds, for classic art;' and the same critic we find comparing some of Rembrandt's female beauties to dirty fishwomen—his Abrahams to Dutch old clothesmen.

The ancient Egyptians, we are told, had but little knowledge of the human form; their figures were but superficial transcripts of individual nature; and while we thus learn their inferiority in art, we are at the same time made aware that they dared not touch a dead body for the purpose of dissection, and even the embalmers risked their lives from the hatred of the populace.

In Greece it was that art first approached perfection; and there its golden age extended from the time of Pericles to that of Alexander the Great. We find that, during the same period, anatomy had begun to be cultivated, both by the physician, and as a branch of general science. The anatomical observations of Thales, Pythagoras, and Alcmeon, prepared the way for the more connected inquiries of Hippocrates, who gave oral instructions in anatomy, as well as the art of healing—and thus disclosed its mysteries to the world. And Diocles Carystus, the most distinguished of his successors, was as celebrated for proficiency in anatomy as for his skill in surgery. Hippocrates was all but cotemporary with Phidias—Diocles with Praxiteles and Lysippus. It was not anatomy as it appeared under Vesalius in the sixteenth century. It was not sufficient for the purpose of either the physician or the surgeon; and, consequently, we find the healing art then poor and impotent as compared with its present condition. It extended little further than a knowledge of the skeleton, muscles, and larger internal organs; for all the minutiæ of the science were as yet unexplored. But this was just what was most needful for art; and it was this amount of anatomical knowledge that enabled the artist to form from his beautiful models his 'marble miracles of grace.'

Galen had no knowledge of this science, except as derived from the older authors, and from his own dissection of apes. Once he had an opportunity of examining two human skeletons preserved in Alexandria; and the Arabian surgeons had to rest contented with the writings of the Greeks on the subject of anatomy, it being strictly forbidden by the Mahomedan religion. Art then lay dormant.

Towards the beginning of the sixteenth century, however, arose an era bearing a striking resemblance in its leading features to that of Pericles, and adorned with the mighty names of Leonardo da Vinci, Michael Angelo, and Raphael. Da Vinci (a pupil of the celebrated anatomist, Mark Antonio della Torre), with talent for every pursuit, had yet no steadiness for any one. But Buonarotti to the highest gifts added indomitable perseverance, and became profoundly acquainted with anatomy. Is it unreasonable to infer, that without this he never could have reached in safety that unknown world of ideal art into which his ardent genius forced his daring hand? Da Vinci, however, first united the science of anatomy with that of painting, and both with nature; and thus may truly be said to have prepared art for the coming greatness,—a greatness which was carried to a giddy height by his brethren in the triumvirate. At this same time, exactly, the labors of Vesalius, Eustachius, and Fallopius, at Padua, Pisa, and Rome, raised anatomy on a new foundation, and thereby began an era almost as bright for medical science as for art. Surely this was not a mere coincidence. Since that time there has been little obstruction to the study of anatomy.—*Miller's Lecture on Pictorial Anatomy.*

A Pen-and-Ink Portrait of Dr. John Augustine Smith.

[FROM NATURE, BY DR. MANLEY.]

I would now willingly close this extraordinary exposition, but I am sensible that the reader, without some key to explain Dr. Smith's conduct, will be apt to donbt the testimony of his own senses. That the weakest member of a college, one who has himself been transposed because of his incompetency; one who, if he was not blind to his own defects, could not fail to have been chastened into some degree of modesty; one whom every physician and surgeon belonging to the institution, whether professor or trustee, considers as the dead weight which the college has been obliged to carry for more than fifteen years; that such a man with a measure of morals such as I have exhibited, and a measure of talent such as he has shown himself to possess, should have had the temerity to break through all the restraints which society imposes in professional life, in order to gratify his own morbid feelings, is a circumstance calculated to tax credulity to the utmost extent of its capacity. But surprise will moderate when the reader is made acquainted with his character. He belongs to that class of men, who although they may acquire their stock of information early, are too soon satisfied with their measure of attainment; no instruction therefore can make them wiser; with a quick perception, but a narrow field of intellectual vision, he jumps to his conclusions from slender premises, and marvels that his reasoning does not produce conviction. Having been a precocious boy, he has become a vain man, delighting in nothing so much as the sounds of his own voice, provided others can hear it also; and to say truth, gratifying all such as have a taste for Italian music, where sense has no connection with sound, and sentiment makes no part of the entertainment. Vanity in general is a venial offence, because as it usually manufactures its own penalities, it rarely becomes very disgusting; but there are cases, where, like a noxious weed, it stints the growth of every think around it, not only by absorbing all the nutriment of the soil, but intercepting every ray of science by its upas shade, and Dr. Smith's vanity is of this character; self is the burden of every lecture. If called to deliver the eulogium of a dead friend, he will turn the occasion to account in eulogizing himself,* and once he had the modesty to allow (and to his credit be it said) that he had seen both in Europe and America, greater men than himself!

Whatever may be its influence on the writers, it is fortunate for the world, that auto-biographies are often written without any consciousness that they are such; and Dr. Smith is among the number of those who take care to describe themselves whenever they speak or write. It would be impossible to hear his lectures, or read his printed essays, without being convinced that be the subject what it may, Dr. Smith's self makes up a large part of it, and the wonder is, that he is not fatigued by the eternal iteration; any thing will serve to introduce such a hackneyed subject! the incidents of a farm yard, a chicken chase, or a fox hunt, will serve as a point of propagation for argument to display the assumed fallacy of commonly received opinions on physiology, and one *false fact* will be adduced to overset an induction based on a thousand. An extraordinary confirmation of this opinion is furnished by a fact of recent occurrence. Dr. Smith is the first vice-president of the New York Lyceum of Natural History, and of course occasionally occupies the chair in the absence of Mr. Delafield, the president; on one of those occasions, being in the chair, and always inclined to be communicative, he observed, 'that he never had a more vivid impression of the infinite divisibility of matter, than that which was presented by the queen bee, whose *one fœcundation served for the procreation of several successive generations!*' What relation the fact, if such, could have with the infinite divisibily of matter, is a little more than common sense can fathom; for he might argue the infinite divisibility of matter, from the transmission of hereditary gout, scrofula, or consumption, with just as much propriety from kindred premises. But the cream of this serious philosophical deduction is, that the fact which was father to this vivid impression is no fact at all. Monsieur Reaumur years ago settled this question as regards the plant louse, (*aphis*,) but it never entered into his head to predicate the same thing of the bee, (*apis*;) it is true of one but not of the other. It is probable that the doctor in his rapid reading of some extract in a philosophical journal, confounded the two terms; or, if his apologists please, as the character *h*, in Greek at least, *non est litera*, he concluded that Monsieur Reaumur so thought, and that the terms, although generic, were synonyms. By the way, it may be well to inform the reader, that the author of this profound speculation is now engaged in a course of reading to qualify himself to deliver a course of Geology, for the benefit of the Lyceum!

His great work, his *monumentum ære perennius*, is entitled Select Discourses, and consists of five introductory lectures, some of which have been so frequently repeated, that the reader has a right to believe that they are free from the feculence almost inseparable from first copies, and yet strange as it may appear, the philosophy they contain is beneath the criticism of the merest tyro in physics. Many things are stated as facts, simply because it would be difficult to prove them false, although no one believes them; consequences are set down as causes, and causes as results; while both are made the bases of tedious arguments to prove what no untutored Indian ever doubted. With respect to some of his arguments, on phrenology for example, it may be safely stated, that although they are intended to disprove the doctrine, and to render it ridiculous, if they possess any weight or influence, they are calculated to support it; it is however not an unusual result of his reasoning, to convince the reader of the truth of the doctrines which he controverts. An amusing instance of this kind occurs in one of the SELECT LECTURES; where all his reasoning is nullified by presenting himself, and his head particularly, in illustration; and indeed it may be well doubted whether the lecture was written for any other purpose than to exhibit himself as an extraordinary man, whose peculiar and transcendent talents, may be readily explained without the aids to be derived from cranial conformation. He states, 'tis true, a fact which may deserve a record, viz., that he has one of the largest heads to be found in America;—that it is very long and very narrow, and that at first view its appearance is deceptive; but he has left the reader to infer its thickness, presuming I suppose that he has furnished him sufficient data in the work, upon which to form his judgment. The above lectures appear to have had few readers. They are said to have been stereotyped, for the benefit of another generation!

Of one thing the most enthusiastic phrenologists may be assured, and it will go far to answer all the objections which Dr. Smith can offer to their favorite creed, viz. that with an intimate knowledge of his character, and a fac simile of his head to illustrate the subject, it would be exceedingly difficult for the most confirmed sceptic to resist the evidence of its truth.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Sept. 3, 1842.

24 Men, 24 Women, 65 Boys, 71 Girls. Total, 184.

DISEASES.

Apoplexy	1	Intemperance	0
Asthma	1	Inflammation	0
Bleeding from uterus	0	Of liver	0
Burned or scalded	0	Of bladder	0
Casualties	1	Of brain	2
Cholera infantum	41	Of stomach	5
Cholera morbus	0	Of throat	1
Congestion of the Brain	0	Of lungs	9
Consumption	14	Of bowels	8
Convulsions	10	Of womb	0
Croup or hives	1	Of kidneys	0
Debility	2	Insanity	1
Delirium tremens	0	Jaundice	1
Diabetes	0	Mortification	0
Diarrhœa	5	Malformation	2
Death from poison	0	Marasmus	12
Dropsy	3	Measles	4
Dropsy in head	11	Rupture	1
Dropsy in the chest	2	Rheumatism	0
Drowned	4	Spinal disease	2
Dysentery	5	Suicide	1
Erysipelas	0	Sprue	1
Epilepsy	0	Small-pox	1
Fever	2	Scrofula	1
Scarlet	1	Teething	3
Typhoid	3	Use of laudanum	1
Puerperal	1	Unknown	3
Remittent	3	Ulceration of throat	0
Nervous	1	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	1	Whooping cough	2
Fracture	0	Worms	0

JOHN H. GRISCOM, City Inspector.

City Inspector's Office, Sept. 6, 1842.

---

* Vide Eulogium on the late Wright Post, M. D., published in 1828, in which after extolling the character of his subject, he very modestly admits that 'he was the only man with whom in the course of his life, he had come into any sort of collision, whose talents and whose station could for a moment induce him to consider as a rival.' And as if to add a sanction to the remark, he appends a note, which gives the reader to understand, that Dr. Post was made acquainted with his opinion, and he has reason to think that he was flattered by it!

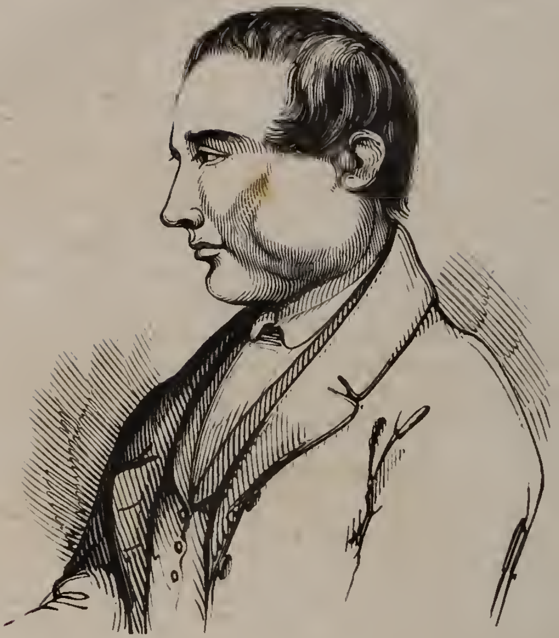

PLATE III.

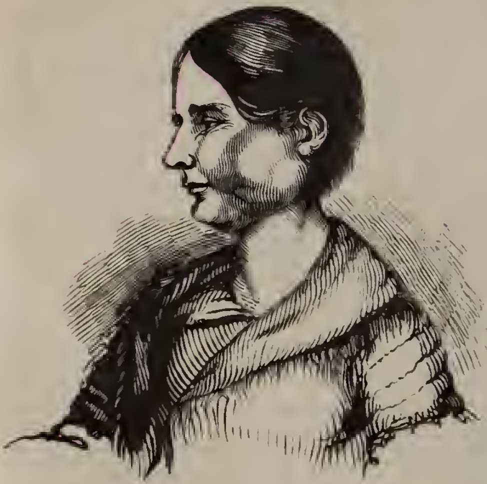

PLATE I.

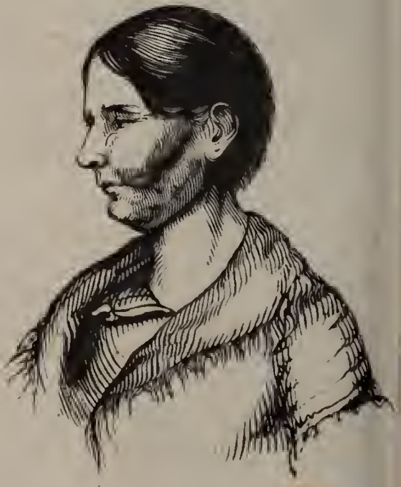

PLATE II.

DR. HOSACK'S CASES OF DISEASE OF THE PAROTID GLAND

[*See Dr. H.'s paper in No. V., Vol. II., p. 74.*]

See Dr Hosack's
article p 74

Plate 1. Case of Mrs. M. Raywood, (before the operation.)
Plate 2. Do. Do. (after the operation.)
Plate 3. Case of Mr. M——.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, SEPTEMBER 17, 1842. No. 12.

CIRCULAR LETTER
TO
THE PHYSICIANS OF KENTUCKY,
ON THE SUBJECT OF
MEDICAL REFORM.

In a late number of our journal we gladly availed ourselves of an opportunity of alluding to the energetic manner in which the great subject of medical reform had been taken up by some of the most influential of our brethren in Kentucky. Agreeably to suggestions from judicious friends of the cause in other quarters, we now republish the circular letter which was prepared and circulated in accordance with the following resolutions, adopted at the State Medical Convention of Kentucky:—

Resolved, That the interests of the medical profession, and of the public in general, would be promoted by the establishment of a board of examining physicians, who shall meet annually for the purpose of conferring diplomas on all candidates who may be found worthy upon a rigorous examination.

It was further *Resolved*, That a committee be appointed to prepare an address to the profession throughout the State, exhibiting the advantages which would accrue to them, by carrying out the foregoing resolution, and inviting them to join with this meeting in praying the Legislature to establish such a board at its next session. Drs. Linton, Duke, Burnet, and Bennet, were appointed that committee.

The Letter, &c.

Dear Sir:—In compliance with the above resolution, we proceed to lay before you, as briefly as possible, the many and great advantages which we believe will necessarily result from the establishment of the board alluded to; and we doubt not that every physician in the State will hail with delight, and examine with deep interest, any project for the advancement of medical science, the promotion of the cause of humanity, and the elevation of the character of the profession.

You have witnessed the late effort on the part of the physicians of Kentucky, to organize themselves into a State Society, and District Societies in correspondence with it. Their object was, no doubt, the advancement of the great interests of the profession and the public. Their first convention was held in Frankfort in the month of January, 1841; some sixty or seventy physicians from the various parts of the State attended, but unfortunately nothing was done at all, adequate to the grand object. After enjoying some scientific repasts, in the form of learned papers and lectures, the convention adjourned, fixing upon the 12th of January, 1842, for its second meeting. In the mean time the physicians throughout the State were notified thereof and urged to attend. The time for the meeting arrived, and as might have been expected, not more than a dozen physicians convened, and the meeting immediately adjourned *sine die*. What was there to induce them to forsake their practice and fireside comforts, and incur the fatigue and expense of a winter journey to Frankfort? Nothing. The manner in which the *first* meeting passed off convinced them that their interests, and the interests of humanity, were not likely to be subserved by a *second*. In a word, they had no motive to attend—a fact by which their absence is at once explained and excused.

Still we are not disposed to abandon the grand object alluded to, and have consequently sprung up into life and organization, as it were, from the ashes of the dead convention, with the determination of making another, and we believe far more rational effort to elevate our profession to the high stand to which it is entitled by its philanthropic and God-like nature. That this cannot be done by merely meeting in Frankfort once a year, to hear papers read and pass a few resolutions in relation to medical ethics and empiricism, we are ready to admit; for as to the papers, they can find a vehicle to the door of every physician, through the press, and as to our proscriptions of quackery, time will prove them to be unavailing—'*vox et præterea nihil.*'

But to come directly to the question. What will best promote our interests and respectability as a profession? Our recipe is short and simple, but the facts and arguments by which its efficiency is sustained, are ample and cogent. Establish a board of Physicians and Surgeons, empowered, as indicated in our resolution, and let this board or college be sworn to require a higher degree of qualification than has hitherto been required in the State, or we might say the United States. All that this college or board of censors should require on the part of the student, should be adequate professional qualification, not one cent of that, the inordinate love of which is the root of so many evils, as well in medicine as elsewhere. To be sure, if the State would defray the expenses of the board, a fee might be required of the student to indemnify the State, which we think would be the best possible arrangement. Let it, however, be clearly understood, that we do not propose to tax the State without fully indemnifying it; nor do we desire any enactment binding present or future practitioners to undergo the severe examination which it will be the duty of the board to institute. We wish it to stand upon its own intrinsic merits, unsustained by Legislative coercion.

Now, the immediate result of the establishment of such a board would be to throw medical teaching, in a great measure, into the hands of the practitioners throughout the State, and the result of this again would be that every physician in the State would exert himself to become qualified to discharge the duties of a medical instructer; and thus rendering himself adequate to the profitable, pleasing and honorable task of teaching his pupils, he would become more learned in his profession, and, consequently, more useful to the public.

But it may be asked, how would the establishment of this board throw these important privileges and incentives to exertion into the hands of the practitioner? The answer is at hand. The board would require nothing but knowledge as a passport to its honors, without prescribing the mode in which this knowledge should be acquired. Now the truth is, that this knowledge can be acquired as well in the shop of the intelligent practitioner as in the halls of the schools, *and at a much cheaper rate*—and thus the question is answered plainly enough for the apprehension of every one.

But is the assertion true that the necessary knowledge can be obtained, as well with the intelligent practitioner as with the professor? why, if this ground be disputed, we will take a bolder and still quite as tenable a position; viz., that nearly all the branches can be better taught and more perfectly understood and digested with the former than with the latter. Who will deny this to be true of the materia medica? It would indeed be difficult to demonstrate that the reading of standard works on this department, under the supervision of an intelligent preceptor, whose shop affords nearly all the objects of the study, would not be as advantageous to the student as listening to the reading of a course or two of lectures, however learned, on the same subject.

Is there any reason why the practice of medicine cannot be learned as well by the aid of the best works extant and a good preceptor, whose numerous patients present the various forms of disease, as by listening to the reading of lectures which, if published in the form of a book, would not surpass the scores of books on the same subject, already in our possession?

We put these questions candidly, and assert, without the fear of refutation, that they apply equally to nearly all the branches of the science. We are sorry to be under the necessity of instituting such comparisons, but the nature of the subject demands them, and we cannot shrink from our duty, though in its performance we may assail the doctrines and views of those whom we esteem, not only as men, but as philosophers. So confident are we, however, of the justice and utility of our measure, that we believe every one who examines it dispassionately will forthwith become its friend and advocate.

We are free to admit that the remarks we have made in regard to the greater number of the branches of medicine, do not so well apply to Chemistry, Anatomy, and Surgery. The former, however, is not necessary in a great degree to the qualification of skilful physicians and surgeons. There are not, perhaps, in the State, a great many physicians qualified to teach Anatomy and Surgery; still there are some, and if this board be established, scores of others will spring up as by enchantment, and these important branches will be cultivated with a zeal hitherto unknown amongst us. Let us examine, for a moment, the mode of teaching these and their kindred departments of science.

It is well known that a teacher of mediocre talents and learning can instruct five or six students better than the most gifted and erudite can teach five or six hundred. The reason is obvious, and it is felt and acted upon throughout Europe, but in a greater degree in Paris than perhaps any where else. The student would prefer the private instructions of Cruvelheir and Velpeau to those of Barth and Chassaignac, but the celebrity and the station of the former draw around them crowds that render them inaccessible, whilst the latter are quite accessible, and sufficiently qualified to teach. Nothing is more easy to demonstrate, than that private instruction is far more advantageous than public. In Paris, where there are always thousands of students from the various nations of the world, the former mode is in full vogue. The public lectures in the schools and hospitals are all gratuitous and accessible to every one; and yet the students neglect the lectures to attend private instructions, though they are obliged to pay for them. Does the student wish to acquire a practical acquaintance with the stethoscope, he employs some intelligent sub-physician of a hospital to teach him. Does he wish to study diseases of the skin, he goes to the hospital of St. Louis and engages some of the Internes to teach him by showing him all the cases of Psoriasis, Eczema, Icthyosis, Lepra, &c., point out to him their distinctive marks, and acquaint him with the most approved modes of treating them. This could not be done by the chief physician with several hundred students in his train, much less by the lecturer in the school. The sub-physician or Interne never has more than five or six students in his class. He could not do justice to more.

The same remarks apply to the teaching of Anatomy and Surgery, especially operations on the dead body, bandaging, obstetrics, and to all the branches of the profession in which seeing and manual dexterity are required. The reason of this is plain and may be expressed in the saying so common among the French, that '*what one sees and feels make a deeper and clearer impression than what one simply hears.*' The public teacher cannot make *three or four hundred students* see and handle, and deliberately examine these things and afford them the necessary explanations—answering the queries and solving the difficulties of each and every one. The private teacher can afford these incalculable advantages to *five or six*. If then, reason and custom, and the highest authorities are to be regarded, attending lectures and following professors through crowded wards, are not the best means of acquiring knowledge, *in any department of the profession.*

But suppose that students do find it necessary to go to large cities to complete their studies of some of the branches. We say let them go. We shall advise them, urge them to go and avail themselves of all the means afforded by chartered colleges, private associations, and well-qualified individuals. We do not wish to tear down the schools, but to devise a plan by the operation of which those rights which are common to the entire profession, may not be entirely engrossed by the *few* to the manifest injury of the *many.*

We return, then, to the proposition that the establishment of an examining college would cause medical lecturing to devolve in part upon practicing physicians. It would act for our good, prospectively, in stimulating our youth to higher attainments, and retrospectively, in urging the present race of physicians to close study, in order to be enabled to discharge the profitable, honorable, and responsible duties devolving upon them. Inaccessible to sinister influences, its honors would be the reward of genius and industry;—requiring nothing but that which study alone can bestow, it would place the rich and the poor upon an equal footing;—the sworn guardian of professional weal and public health, its sanction would be sought with avidity by the student, and regarded as the highest evidence of adequate qualification by the community. It would elevate the standard of professional excellence, pave the way by which that standard may be reached by those who are to succeed us, and thus secure to present and future generations the inestimable boon of well-qualified practitioners in the Divine art of healing. In other words, it would promote the interests of the profession and of the public Let us examine briefly the objections which may be urged against the establishment of such a board.

Will it be said that there cannot be found in the State, five or six physicians sufficiently learned to constitute it? Such a charge would be alike unfounded and insulting, notwithstanding the dearth of learned physicians caused by the state of things which we wish to reform.

Will it be objected that the board will not be respectable and popular? It cannot, in the nature of things, be otherwise, if it require the high degree of qualification alluded to.

Will it be further urged that even under the present state of things, a portion of medical teaching devolves upon the practitioner, as it is his province to prepare the student for the lectures? This objection is destitute of foundation; for, all that is necessary in order to the student's graduation is, that he attend *two* courses of lectures with *tolerable industry.* True, we believe that there is something like a law with the schools, requiring young men to study a year or two with a physician preparatory to attending the lectures; but this law is a dead letter. If the student but attends the two courses, and answers with tolerable facility, the questions of an hour, he is forthwith an M. D.

But suppose these institutions did rigorously require on the part of the student a year or so of preparatory study? What of it? Student and preceptor both know that the former can pass his examination without such study. The student feels independent and the preceptor careless; and thus the preparatory study is 'lost time,' or to say the least of it, time not very profitably spent. Indeed, what is there under the present state of things, to stimulate the preceptor to exert himself for his pupil? Neither gain nor glory. Students will not pay for preparatory instruction, when they are aware that the lectures will perform the double office of carrying them in triumph through the green box, and draining their pockets. Money is far more important to them than preparatory instruction, and can they be expected to change the former for the latter?

But suppose that well qualified physicians should require a fee of their pupils? Why, they would get no pupils—for there are always those who are not qualified, who would take them gratuitously, and such men, we admit, can very well *prepare* them for obtaining honors which can be obtained without any preparation at all!

If it be urged that the patronage of the schools will be injured by the measure we advocate, we would ask whether the general good ought to be sacrificed to the interests of the few? But if the schools be necessary to qualify young men for passing rigorous examinations, their patronage would be rather increased than diminished; and if they are not necessary why impose upon the profession the necessity of paying extravagant sums for that which can be obtained elsewhere and upon better terms? This would indeed be strengthening a monopoly with a bonus, and purchasing oppression at the price of the means by which it should be countervailed.

The truth is, that the establishment of this board would place the schools on the only ground which they should occupy—that of their real merit and utility; and that they possess both, and are capable of a great deal more, we are free to admit. Our object is not to injure them, but to benefit the profession. We do not wish to see medical teaching wrested from their hands, but that a part of it be retained in the hands of their brethren. We do not wish to dash the cup of nectar from their lips, but to see the profession at large aroused from a state of collapse and lethargy by a few drops of its inspiring contents.

We think it proper to make a distinction between our professors and the schools to which they belong. This is dictated alike by a sense of justice and our own feelings. The former, so far as any acquaintance extends, are worthy of higher encomiums than perhaps our pen can award—we respect them as men and revere them as philosophers. All this, however, is perfectly compatible with our objections to the present economy of their schools. We shall not presume to propose what we think the necessary changes, we only propose a measure which does not touch their constitution, but which will afford to the profession at large an incentive to industry and scientific zeal which cannot fail to redound to our honor and respectability as a body, and the good of our species.

In a measure so fraught with advantages, we have a right to expect the able and hearty co-operation of the professors themselves. It is not certain that they would be injured by it even in a pecuniary point of view—because a higher standard of qualification would render more teaching necessary. But even if their income should be a little curtailed, we have no right to fear that they are not prepared for a greater sacrifice, if they believe it will be offered up on the great altar of public utility.

It is a little surprising that we are politically a republic and medically an oligarchy, whilst in most of the nations of Europe medicine is a republic and government a species of oligarchy. The state of things in regard to medicine which we wish to bring about is essentially that which exists in the old world. Ireland, for example, has a dozen medical schools and but one examining college of physicians. The examining boards of Surgeons and Physicians in London, which are as high tribunals as any of the kind in the world, do not require candidates for diplomas to attend prescribed courses of lectures. They require a high degree of qualification, and this the candidate may obtain from private teachers or public lectures. Moreover, any physician or surgeon may be a lecturer, for there is no monopoly. This gives a powerful stimulus, fair play, and 'ample room and verge enough' to talents and industry. To this wise policy England is indebted for her Hunters, her Abernethys, her Coopers, and her Lawrences. This is what we want; this is just, and this the state of the profession imperiously demands. A thorough knowledge of human nature and the experience of ages have proven this to be the best course, and why it is so would not be difficult to demonstrate. The concentration of the various departments of power and patronage into the hands of the few, not only leads to abuses but paralyzes the energies of the many. What would be thought of placing the legislative, judicial and executive powers in the hands of one body without check or control? Closely analogous to what this would be in government, is the present condition of medical affairs, and the result is deplorable. Let us then have the necessary check to balance,—let us adopt the plan which experience and reason have proven to be best, and which common sense unites with common justice in demanding, that we may enjoy the blessedness of republicanism in science and letters as well as in government.

The zeal with which we believe you are inspired, for the good of our common profession and the cause of humanity, has induced us to address you this circular. We have treated the subject as briefly as possible, knowing that all that is necessary to the success of the measure proposed, is that the mind of the profession be brought to bear upon it and contemplate its many and inestimable advantages.

If you concur with us we hope you will immediately call a meeting of your fellow physicians, and transmit your names to our secretary, (Dr. Duke, of Maysville,) petitioning the Legislature to grant us a board, such as we have designated. We would request you also to engage in its favor your county representation, and meet us in Frankfort, if you can, at the next session of the Legislature. The object is worthy of your exertions, and we do not fear that you will be wanting in the discharge of your duty to yourselves individually, to the profession at large, and to the public.

M. L. Linton, J. Bennet,
Jno. M. Duke, J. Burnet.

We have only space sufficient to express our earnest wish that the example of the 'State Medical Convention of Kentucky,' will speedily be followed by all the friends of the cause throughout the Union.

GLEANINGS FROM THE FOREIGN JOURNALS.

Amaurosis from Pressure on the Retina.

BY EDWARD O. HOCKEN, M. D.

[Amongst the various causes of pressure upon the retina, hydrophthalmia is not uncommon; and on this subject Dr. Hocken has written a good paper, in the 'London and Edinburgh Monthly Journal of Medical Science,' which, amongst other things, points out the efficacy of turpentine in its treatment. 'General hydrophthalmia, is an affection in which the vitreous and aqueous humors are both morbidly increased. The pressure from behind is counterbalanced by the force exerted anteriorly, and hence the iris retains its normal relative situation from the equality of pressure exerted on all sides. In this rare affection there will generally be found great imperfection of vision, a tendency to central thinning and a central protrusion of the cornea, occasioning marked *visus obliquus*. The ordinary remedies so frequently fail in this disease, that we are generally obliged to have recourse to paracentesis oculi, with a repetition of the operation when the fluid accumulates sufficiently. Beer even recommends in some cases, that the cornea be divided and the lens extracted, as well as the chief part of the vitreous humor. Dr. Hocken has seen turpentine of excellent use in some of these cases. Respecting this treatment, he says:—]

I have too often witnessed its decided powers in very chronic changes to doubt its efficacy. Now, although I have, as yet, had no opportunity of fairly testing its effects in hydrophthalmia, yet, from analogy, I infer that it would be most likely to stop the progress of the affection, or induce reparative processes; at all events, it merits a careful trial. How important would it be to find a method of treatment capable of even suspending the symptoms and preventing their advance! Turpentine, in small and regular doses, holds out the best chance of accomplishing these ends, if not of procuring a perfect cure.

The dose should be small, and continued regularly,—half a drachm to a drachm, two or three times a-day, in almond emulsion, containing a small quantity of the sesquicarbonate of soda in solution, and some agreeable syrup to cover its unpleasant taste. Mr. Carmichael's observations on its employment in iritis, are judicious: he gives an excellent formula for its administration. I have seen this plan of treatment especially useful in the more chronic forms of choroiditis; the natural appearance of the globes and healthy vision being restored by its continued and judicious employment. It succeeded in a patient in whom one eye was affected; and the symptoms suspended, with the occurrence of an exactly similar disease in the same tissues of the opposite organ, again yielding to the careful administration of turpentine.

Treatment of Varix.

BY M. VELPEAU.

[The treatment of varicose veins is either radical or palliative. It is not necessary to dwell on the latter. The radical cure has been attempted by a great variety of methods, by acupuncture, cauterization, compression, excision, incision, section, resection, and ligature. All these methods now seem to be nearly abandoned, with the exception of acupuncture, ligature, and local pressure.

In an interesting lecture on the subject, M. Velpeau gives a good epitome of the practice of some of our continental neighbors.]

Acupuncture.—In the year 1839, I published some remarks, intended to show that an artery might be obliterated by leaving a foreign body in it for a certain length of time. This fact was soon applied to the veins. Two methods have been proposed, that of M. Fricke and that of M. Davat.

Method of M. Fricke.—The Hamburg professor, having fixed the vein under the skin, passed through it a needle, armed with a strong thread. This was done, at intervals of a few inches, in every vein that it was thought necessary to obliterate. The thread was moved daily in the vessel to excite inflammation, and was removed on the third or fourth day. M. Fricke pretends that this operation never fails; and in November, 1835, he wrote to inform me that it had never, in his hands, given rise to any dangerous symptoms. I have been less fortunate. I operated on twelve patients; inflammation of the vein took place in all; in eight cases the inflammation was merely local; in three the lower extremity was seized with phlegmonous inflammation and extensive suppuration, which required numerous incisions, the patients barely escaping with their lives; the twelfth patient died of phlebitis. One of the three patients, who had so narrow an escape, suffered a relapse eighteen months afterwards. The result of these experiments were, as you may imagine, sufficient to prevent me from continuing to employ M. Fricke's operation.

M. Davat's Method.—This method consists in the passing a needle through the skin underneath the vein; the vessel is then raised up by the needle, and a second one is passed downwards through the vein, and brought up again through the vessel, having passed round the transverse needle which it crosses; the needles are supported by some thread twisted round them in a figure 8.

Local Pressure.—Delpech's Method.—An incision, about an inch in length, is made over the vein; the latter is raised up, and a small piece of German tinder placed under it; the wound is now closed, compresses are applied above, and pressure is thus exercised over the point of the vein which we wish to obliterate. The wound and the vein soon inflame; but the objections to this method are too numerous to require our dwelling on it.

M. Sanson's Method.—This consists in applying a forceps, the blades of which are brought together by screws, to the vein. The instrument is removed every twenty-four hours, M. Sanson's method is certainly free from danger, but it appears to me to be an ineffectual one.

Ligature.—M. Velpeau's Method.—Gentlemen, the little confidence which I was disposed to place in the operations just mentioned, induced me to attempt some other method. In 1830 I first tried my operation on animals, and in 1835 I first employed it on the living subject. Since then I have repeated the same operation so frequently in public and private practice, that I am unable to tell you how often it has been performed. A strong, sharp pin, with a large head and a waxed thread, are the only instrument that I use. The position of the patient is a matter of some importance. He must be placed in such a posture as will render the veins tumid and prominent. The trunk of the vein is now raised up with the fingers' end, the pin is passed below the ends of the nails and underneath the vein; it will be necessary to protect the finger with a thimble or a roll of linen, for the tissues under the varicose vein are often very hard and resistant. This simple process must be repeated with regard to every dilated vein; eight, ten, twelve, or fifteen pins may be required from the foot up to the knee, but, generally speaking, three or four are sufficient. When the veins are free and moveable under the skin, it is easy to pass the pins under them, but, when they are applied closely to the bones, this is sometimes impossible; you must then pass a strong pin perpendicularly downwards, and then direct it obliquely under the trunk of the vein. The pins, being all placed, are fixed with threads; at first I applied the ligatures as we do for hare-lip, but this did not exercise sufficient pressure. I now twist the thread circularly round the pin, and draw it tight. The pins and ligatures are not removed before the sixth or twelfth day, when the tissues embraced between them have been destroyed. But even if the eschar be not detached at this period, I remove them, because I feel confident that the vein is obliterated.

The introduction of the pin gives very little pain, but the constriction exercised by the ligature is excessively painful. Hence, you should commence with the highest pin, in order to cut off the nervous communication as much as possible. The effects of the operation are simple. The tissues embraced by the ligatures mortify and are separated, leaving a sore, which soon heals up. A hard chord forms above and below; this is the vein in process of obliteration. No dressing is required after this operation. You have merely to cut short the ends of the pins, to prevent them from pricking the patient. Unless the inflammation be severe, the patient may go about; if it be excessive, then you confine him to bed, and have recourse to the antiphlogistic treatment. As soon as the eschars come away, the small sores which remain are treated as common abscesses or burns.

M. Reynaud's Method.—Being desirous of avoiding the pain occasioned by ligatures, M. Reynaud passes a thread under the vein, and a small compress supported by a strip of sticking-plaster over it; he then tightens the ligature and increases the pressure every day. This method may succeed, but it is so difficult to obtain complete obliteration of the veins, that I fear it would frequently be followed by relapse.

Gentlemen, the operation which I have described to you, is extremely simple and easy of execution; the whole process consists in passing a pin and winding a bit of thread round it. It fulfils the object of obliterating the vein as well as any other method, but is free from the dangers which attend them. You may ask, however, if it always succeeds in establishing a radical cure. Our answer must be, No. The disease will not always yield. When one dilated vein is obliterated, three or four others soon appear, the superficial branches anastomose with the deep ones, and nothing is more difficult than to obstruct completely the circulation of a varicose limb. Hence the efficacy of every process or method that may be proposed for the radical cure of varix is extremely doubtful. In the observations which I have addressed to you I have considered one point only—viz., the necessity of obliterating the veins as a means of curing varix; this being admitted, we have to seek for the best means, and I think the one which I have proposed to you affords the greatest advantages. Of more than one hundred patients on whom I have operated by this method, not one has presented any dangerous symptoms; some slight external phlebitis and the formation of some small abscesses were the only consequences of any moment that ensued. Still, I always dreaded that such constant success, in this matter, would be interrupted by an unfavorable result, and my apprehensions have been unfortunately realized. The only fatal case occurred recently.—*Prov. Med. and Sur. Jour.*

Treatment of Varicocele.

BY M. VELPEAU.

[This disease which consists in a dilatation of the veins of the chord, is treated in various ways by different surgeons, and very much according to the peculiar treatment of varix, which each surgeon adopts. Cumano employed the ligature and extirpation at the same time: Mr. Warren excised or tied the varicose veins of the scrotum: M. Moulinié combined excision with ligature: Delpech divided the scrotum, exposed the chord, and tied or incised the veins; in some cases he passed a small bit of sponge under the dilated veins and fixed it with strips of sticking plaster—it is said he cured six out of seven patients in this way. We should, however, beg leave to doubt the truth of this assertion. Bell has tied the spermatic arteries for this affection. Within the last ten years several new methods of treating this disease have been tried, all based on the results obtained from M. Velpeau's experiments on the acupuncture of vessels. This eminent surgeon adopts the following method:—]

My process, says he, consists in passing a needle underneath the vein, and twisting a ligature round its two ends, so as to compress the vessel in a circular manner. The patient is placed on his back, the scrotum shaved, and the vas deferens held aside. I then seize the scrotum from behind, and with the thumb and index finger of the other hand I bring the mass of varicose veins forwards towards the integuments, and fix them in a fold of skin; an assistant holds one end of this fold, while I support the other. I then pass a needle under the veins, in the way described for varix, and bring a ligature round it; a second needle is passed within about an inch of the first one. You must avoid inserting the needles too low or too high, and separating them too far from each other. If the lower needle, for example, be placed too low down, you may wound the tunica vaginalis; if the superior needle be inserted too high up, you will have difficulty in separating the veins of the chord; finally, if the needles are placed too close to each other, the two wounds may unite and form one. The needles being placed, the ligatures are wound circularly round them, in the same way as for varix of the lower extremities; I need not, therefore, detain you with a description of details which you have heard so lately. When the eschars are detached, the needle are withdrawn from the tenth to the twentieth day. Unless the inflammation which supervenes be severe, the patients are not confined, and a cure takes place in about a month. I have never seen phlebitis occur after this operation; in two cases, however, where the inferior needle was inserted too low down, inflammation of the tunica vaginalis came on. The whole of my patients, then, were cured in a short time; and, of those whom I have since met, not one has suffered a relapse. This, perhaps, may be accounted for by the fact that in varicocele the chances of radical cure are much greater than in cases of varix of the lower extremities, because the free anastomosis between the veins is absent.—*Prov. Med. and Sur. Jour.*

On Tracheotomy.

BY M. MASLHIEURAT-LEGRAND.

[An interesting report on this subject has been read to the Academy of Medicine, Paris, by M. Berard, in which some very excellent cases, showing the efficacy of this operation, are introduced.

M. Maslhieurat not being provided with a canula, drew aside each lip of the division of the cricoid cartilage with a bent pin; a string attached to the head of each pin, and tied behind the neck, kept the wound open. The cricoid cartilage and three rings of the trachea were divided in the operation with a probe-pointed bistoury, introduced through a wound previously made in the thyroid membrane. In one case, death seemed to have taken place, and yet resuscitation gradually took place in about half an hour, and the infant expelled during a violent fit of cough, a false membrane, tubular and bifurcated at one extremity. There is no doubt, that in cases of croup, where death is threatened by a gradually augmenting narrowness of the glottis, and by a consequent mechanical obstruction to the passage of air into the chest, tracheotomy ought to be more frequently practised; but where the disease has extended to the bronchia and lungs, the operation will not be advisable.

A very extraordinary case is related by M. Trousseau, in the *Journal des Connaissances Medico-Chirurgicales*, for October, 1840, where the patient had breathed his last a few moments previous to the commencement of the operation. The operation in fact seemed to be performed upon the dead subject, and artificial respiration was kept up by means of alternate compressions of the thorax. The heart commenced beating in about a quarter of an hour, and in 57 minutes a deep inspiration took place. The patient ultimately recovered.]

M. Maslhieurat, in his first operation, carefully tied some small arteries and veins which yielded blood profusely, apprehending, he says, the entrance of blood into the trachea. In so doing, he conformed to the precepts laid down by almost every author who has written on the subject, it being a nearly general precept to open the trachea when the wound is bloodless. Daily experience tends, however, to show that this precept is unnecessary, and furthermore, impossible to be observed. The entrance of blood into the trachea is a circumstance which need not to be feared. Any one that has witnessed the performance of tracheotomy, must have been struck with the violence with which every substance contained in the trachea and bronchia are expelled through the wound at each expiration, and with what facility the air, on the contrary, enters the lungs, when the lips of the wound are kept asunder. Excepting, therefore, the case where an artery capable of furnishing abundant hæmorrhage, is wounded, (and no artery sufficiently large to do so exists in front of the trachea,) why should the operator stop to tie an artery, and more especially a vein? particularly when we know that the surest mode of arresting venous hæmorrhage is to open the trachea largely, so as to render respiration free. Within these few months I have performed tracheotomy six times—on four children and on two adults. In each case the proceeding was prompt and easy. A few incisions laid the trachea bare, and without tying any vessel, without waiting for the cessation of hæmorrhage, the trachea was punctured at the inferior angle of the wound with a sharp-pointed bistoury, and the rings of the trachea and the cricoid cartilage immediately divided, by directing the same instrument upwards. We preferred incising the trachea with the same instrument with which it was punctured, as we regard the danger of wounding the posterior wall of the trachea as merely imaginary; and there is often the greatest difficulty in introducing a blunt-pointed bistoury into the small puncture made in the trachea by a sharp-pointed instrument.

M. Maslhieurat having been compelled by necessity to keep the lips of the wound open by means of two bent pins, raises the question whether an instrument consisting of two hooks, kept on the stretch by means of a spring, would not be preferable to a canula, and has presented to the Academy an instrument constructed on this principle. The suggested advantages of the instrument are—1st. That it is less likely to become obstructed than the canula; the accumulation of mucus being so rapid that the canula has often to be changed several times daily. 2dly. The wound being kept open by means of a simple hook, which occupies much less space than the canula, a large quantity of air (the extent of the wound being equal) is admitted. 3dly. The proposed instrument can in no way impede the progress of the air into the larynx, while the canula allows little or no air to find access to that organ, a circumstance which, according to M. Maslhieurat, impedes the restoration of the mucous membrane of the larynx to its natural condition, and favors the persistance of aphonia, which is sometimes so obstinate. 4thly. There is, perhaps, somewhat less risk of pneumonia from employing the proposed instrument, which scarcely comes in contact with the mucous membrane of the trachea.

The three first of these alleged advantages seem of little importance. If the canula becomes obstructed, it is easily cleaned and replaced. If the calibre of the canula is proportioned to the aperture of the glottis, respiration is perfectly free; and if an opening be made on its convexity, the air finds free access to the larynx. As to the greater irritation caused by the greater bulk and length of the canula—there is unquestionably a danger to be more apprehended in theory from the canula than from the proposed instrument; but daily experience shows the harmlessness of the former instrument.

[In this report by M. Berard, we should be afraid to agree with him in saying, there is seldom danger of hæmorrhage in performing the operation; because cases have been related where the hæmorrhage was fatal, and, therefore, it is always necessary, if hæmorrhage should result during the operation, to tie the vessel before proceeding further.]

On the Process of Inoculation as a Test of Syphilis.

BY HERBERT MAYO, ESQ., F. R. S.

[Although much has been written of late on this subject, we have not seen the particular mode of the application more clearly and briefly explained than by Mr. Mayo. Several objections have been repeatedly urged against the process of inoculating a patient to ascertain with certainty whether or not the chancre is really syphilitic. It has been urged, that by producing another sore, we increase the chance of affecting the constitution: but most surgeons now believe that one sore will produce as much mischief as two. It has been also asserted, that matter from any angry sore, introduced below the skin, is likely to cause the point to fester. This, however, is denied by Mr. Mayo. He makes the following remarks on the way in which the inoculation is to be performed:—]

Before arming the lancet, the suspected sore should not have been wiped, or dressed with any chemical application, for two or three hours at least. The most convenient part for inoculation is the back of the forearm immediately above the wrist.

The point inoculated should be covered with a patch of sticking plaster, and not disturbed for three days.

At the expiration of that period, on examining it, either the punctured point is found to be scarcely distinguishable, having healed, and having no redness about it; or it has ulcerated, and the skin around it is inflamed, and if the epidermis is not broken in raising the sticking plaster, there is seen a small flat vesicle containing lymph or pus, surrounded by an inflammatory zone. Occasionally, but very rarely, the inoculated point does not become inflamed during the first three days, but on the fourth or fifth a pustule suddenly forms.

When the inoculation has taken to this extent, the evidence required is obtained. The suspected sore is certainly of syphilitic origin. And, if circumstances are not present to contra-indicate the use of mercury, a mercurial course should be immediately commenced.

It is needless to say, that if the appearance of the suspected sore and its history are such as to make it more probable that it is syphilitic, the mercurial course should be commenced at once, as it does not interfere with the production of the artificial sore.

Then comes the consideration how to get rid of the minute artificial sore. For this purpose it is necessary to apply to it well and sufficiently the nitrate of silver, pencilling the sore with a pointed stick of lunar caustic, so that the texture may be destroyed to the depth of half a line. The sore thus treated, at its origin, will certainly heal. If, however, through the imperfect application of the caustic, it does not heal, but on the separation of the slough, it presents the same appearance as before, caustic must be re-applied.

Another objection to the test of inoculation is, that it may fail when the case is really syphilitic. But the force of this objection is lessened when it is considered that we can determine the circumstances by which failure is liable to be caused. They are the following:—

a. The secretion having been accidentally removed from the surface shortly before inoculation.

b. The character of the sore having been changed by escharotic applications.

c. The character of the sore having been changed by inflammation or sloughing.

d. The nature of the secretion having changed through time. I have seen two cases of indurated chancre, one in a female, the other in a man, in which I obtained no artificial sore by inoculation. But in the first of these, secondary symptoms followed; in the second, they had already manifested themselves. The common point in both was, that the sores had been there many weeks. Both were treated with mercury.

Thus, M. Ricord's test of inoculation is in most cases not required; and, when resorted to, must be used with great circumspection; for, if its results are affirmative, the artificial sore requires particular vigilance in its management; and, when negative, the failure to produce a second sore can by no means be regarded as entirely decisive of the nature of the first. With these restrictions, however, and taken as a supplementary means of diagnosis in certain doubtful cases, M. Ricord's test has great utility. It enables one, for example, in a case of strong suspicion, at once to begin mercury, by superseding the necessity of preserving the natural appearance of the sore as a guide in the diagnosis. And again, in cases where the suspected sore begins to heal in a few days after the commencement of the treatment, the result obtained from inoculation, helps one to decide whether the further use of mercury is necessary.—*Medical Gazette.*

REVIEW DEPARTMENT.

I. *Comté Rendu des Seances de l'Académie des Sciences,* No. V. *Août,* 1841. (*Rapport fait à l'Académie des Sciences au nom de la Commission dite de la Gélatine.*) Paris, 1841. 4to. pp. 77.

Report made to the Academy of Sciences in Paris by the Gelatine Commission. Paris, 1841.

II. *Proceedings of the Philosophical Society of Glasgow.* (*Report of the Physiological Committee 'On the best means of providing cheap and nourishing food for the Poor.'*) Glasgow, 1842. 8vo. pp. 16.

Article Second.

FROM THE BRITISH AND FOREIGN MEDICAL REVIEW.

We have hitherto confined our attention to vegetable food. Experience, however, demonstrates that the diet of man must be presented to him in a variety of forms, and must not be restricted to the vegetable kingdom. At one time it was conceived that scurvy could only be produced by the use of salt provisions. More careful inquiry has, however, shown that scurvy may be engendered by restriction to one kind of diet; so that even vegetable food possesses both a scorbutic and anti-scorbutic agency under particular circumstances. Scurvy frequently attacks the Indian in South America, who lives almost on rice alone. It has reigned epidemically in the rice grounds of Lombardy and Piedmont. The same disease prevailed in an epidemic form in Germany in 1771 and 1772, years of scarcity, when many of the inhabitants were obliged to live on legumes, roots, and even the bark of trees. Scurvy affected numbers of the poor people of France in 1812, 1816 and 1817, when even wild plants were employed as food, in consequence of scarcity. Its effects have been severely felt in India. At the lunatic asylum of Moorshedabad, one third of the inmates are annually affected with scurvy; their diet consists principally of vegetables—all good of their kind. The deleterious influence of a bread and water diet is sufficiently evinced by the fact, that among the prisoners in the jails of Bengal and Agra, the mortality was 66 per thousand, while among the native troops the deaths were only 10.6 per thousand. How far such treatment of men falling into error is congenial with the benevolent doctrines which 'desire not the death of a sinner, but rather that he should turn from his wickedness and live,' this is not the place to inquire.

Scurvy is obviously a symptom of bad nutriment—the blood being imperfectly formed or the tissues abnormally deposited. It arises from the want of nourishing food, and a proper admixture of those varieties of diet which were destined for the sustenance of man. The well-known disease at the Millbank Penitentiary—a mixture of scurvy and dysentery—was attributed to the employment of a diet into which succulent vegetables did not enter as an ingredient. Scurvy is therefore one of the forms which starvation assumes, and bears close analogy to the symptoms described by Magendie as occurring to dogs when they were fed upon articles which did not contribute to their nourishment. Starvation in this form has been traced to its true cause after its occurrence for hundreds of years, because it was detected in jails and madhouses, and was subjected to a careful examination. How many other forms starvation assumes among the poor and helpless is unknown. From the Registrar-general's report for 1839, it appears that 130 persons died of direct starvation—that is, purely from want of food. But how many persons perished from starvation, obscured by other names, has not yet been pointed out by statistical data. Numerous points of inquiry, however, present themselves to the medical statistician in considering this question. How far are typhus, scarlet fever, and other diseases of large towns influenced by bad and imperfect nutriment; and how far does restriction to meagre vegetable diet operate upon mortality in our manufacturing towns?

The following table exhibits the mortality of some of our largest towns compared with the deaths over the whole of England and Wales in 1839:—

Mortality in England and Wales	2.17	per cent.
Average mortality of towns in England and Wales	2.62	"
Birmingham	2.58	"
Liverpool	3.18	"
Glasgow	3.26	"
Manchester	3.45	"
Whitechapel	3.86	"

From this table we deduce that the mean duration of life in England is 46 years; in towns 38 years; and in Whitechapel 26 years. How far is this mortality attributable to inefficient nourishment? We are convinced that those who have had much intercourse with the poor in their wretched hovels, will bear us out in confirming the propriety of this question The great burden of the starvation and mortality falls upon the poor; but bringing as it does with it a train of evils and diseases, the consequences must, in some measure, affect the richer portion of the community, in the form of infectious diseases; so true is it that the prosperity of any one class of the population is dependent upon that of all the others.

Experience, the structure of the teeth, and of the digestive organs of the human body, demonstrate that the flesh of animals should enter as an element into the food of man. Some kinds of animal food are digested with much greater rapidity than vegetable food. Bread and coffee require about 4¼ hours; fresh beef from 3 to 3½ hours; salt beef from 3½ to 5½ hours; salt pork from 4½ to 6 hours; mutton 3¼ to 4½ hours; fowl 4 hours; veal from 4 to 5½ hours; tripe 1 hour; pig's feet 1 hour. But these numbers depend considerably upon the circumstances under which the food is swallowed. If the quantity taken be in excess, slow digestion is the result; and the same remark holds with respect to passions of the mind; exercise also promotes digestion. It is interesting to know that those substances which are most nutritive are not those which are most rapidly digested. Gluten, which, according to Magendie, is exceedingly nutritious, has been found in the stomach five hours after being swallowed. Pig's feet, on the contrary, which are digested in an hour, contain a large proportion of gelatine, which, according to the experiments of Magendie, possesses very inferior nutritive properties. To those who are favored with the blessings of this life, any of these substances may be procured at will. It is when viewing the conditions of the poor that we must consider diet in an economical point of view; and with them the point is not how to create an appetite, but how to satiate it in the cheapest and most substantial manner.

Papin was the first individual who introduced the method of preparing food from bones, by exposing them to the action of water and steam under pressure in his digester. By this operation a greater quantity of gelatine or animal matter of the bone was dissolved than could be procured by simply boiling bones in water at the ordinary temperature, although Papin considerably exaggerated the advantages of his invention. Papin was a Frenchman, and practised medicine in London about 1680. He published a work in 1682, on the manner of softening bones, and cooking all sorts of meat; he declared that his digester could transform an old hard cow into excellent meat, (*vache dure et vielle en excellente viande.*) At the commencement of the French revolution, when provisions were dear, the attention of men of science was directed to the improvement of the food for the poor. Proust, D'Arcet and Pelletier took the lead in this attempt at amelioration, but carried away it appears by the enthusiastic feelings of the times, they made a report to government which subsequent inquiry has not corroborated. The government issued a public instruction to the following effect:—'A bone is a tablet of soup formed by nature; a pound of bone gives as much soup as six pounds of meat; bone-soup, in a dietetical point of view, is preferable to meat-soup.' It is obvious, from these high-flown expressions, that gelatine and nutritive matter were considered as synonymous. Such views continued to be entertained by many Frenchmen, but by none more conspicuous than by the younger D'Arcet, who inherited the gelatine mania from his father. According to him, by using the bones of four oxen a fifth is created. At his suggestion the method of extracting gelatine from bones under strong pressure, by the action of steam, was introduced into some of the hospitals of Paris, especially the Hôtel Dieu. The gelatinous solution employed for making the soup at the hospitals, is extracted by submitting to the action of high pressure steam, the bones proceeding from the meat used in the house: these bones have undergone two decoctions, the first in the morning in preparing the ordinary soup, and the second in the evening for producing the *bouillon maigre*. These bones, after being freed from cartilages, are broken up and are introduced into cast-iron cylinders, where they are exposed to the action of steam, at the temperature of 219° to 221°. The first product of this action is fat, which separates while the gelatinous water cools; the gelatinous fluid is then employed to form the basis of the soups for the sick, being mixed with meat and vegetables. A commission appointed to report upon this soup, gave a favorable opinion of its nutritive power; while the physicians and surgeons of the Hôtel Dieu gave an opposite opinion in the following words:—'The soup made with the gelatinous solution is of bad quality; this soup is more liable to putrefaction than common soup; it possesses a disagreeable taste, which is capable of inducing even disgust; it is less digestible than common soup, and may even impair the functions of the digestive organs; it contains a smaller proportion of nutritive matter than common soup, and the nutritive matter which it does contain is inferior in quality to that of ordinary soup.' The consequence of this report was an order for abolishing the use of the apparatus. But, before removing it, Soubeiran, a distinguished chemist was consulted; he advised the extraction of the gelatine by means of acids, and disapproved of the vapor method. About the same time M. Donné made some experiments upon the nutritive properties of gelatine. He swallowed three times a day an ounce and a half of gelatine along with about three ounces of bread. In six days he lost two pounds of weight, and was tormented all the time with the sensation of hunger, and experienced great debility. Two dogs, to which he gave gelatine, refused to partake of it, even when presented to them in an attractive form. M. Gannal, a manufacturer of glue, had observed that rats, which are always ready to devour animal substances, would not touch gelatine nor glue. He made experiments upon five members of his family, and drew the conclusion that gelatine is not only incapable of nourishing human beings, but that it is even hurtful to health, when introduced beyond a certain proportion into regimen. About the same period Edwards and Balzac found that bread and gelatine, when given together, were nutritive, but that they are insufficient; that soup and bread are capable of supplying complete nourishment, and that the addition of meat-soup to a regimen of bread and gelatine, is adequate to nourish the human body in a complete manner.

About 1831, a commission was appointed by the French Academy to inquire into the truth of these apparently contradictory statements. The commission, after continuing their experiments for nearly ten years, have now published their report. But the results, so far as their importance is concerned, are neither worthy of the time which has been bestowed upon them, nor the space which the report occupies. For with the exception of the observation of the fact, and this we admit is a curious one, that animals can subsist for a considerable period of time on gluten alone, we are not aware that any of the deductions are novel. The first experiments on animal substances were instituted on gelatine. The gelatine was extracted from bones by different methods. But we believe the high-pressure steam system was not adopted. Indeed we think there is every reason to believe that gelatine, when acted upon in the manner suggested by D'Arcet, is deprived of ammonia and is converted into glue. So that the soup proposed by D'Arcet might with greater propriety be denominated glue-soup. The gelatine produced in this manner is destitute of the characteristic property of forming a jelly with water. Indeed our surmise is put beyond doubt by the fact stated by those who have examined the soup of the Hôtel Dieu, that the solution of gelatine when evaporated, left a hard extract, presenting the character of Flanders glue. We think it possible, however, that a gelatinous solution might be extracted from bones under pressure, without the disengagement of any ammonia, or without the evolution of any disagreeable odor. We draw this inference from a carefully conducted experiment, in which a bone lost by exposure for an hour to a temperature of 230° in a Papin's digester, 14½ per cent. The resulting liquid possessed a highly agreeable flavor, nor was the slightest ammoniacal smell perceptible. The advantage of a considerable elevation of temperature is obvious, when we contrast the preceding experiment with another, in which a bone, after boiling an hour and a half in water in a common pot, lost only 5½ per cent.—(Glasgow Report.) Now, according to the French commission, the constitution of bones in an economical point of view is as follows:—

	Sheep's-feet bones.	*Ox-head bones*
Water	47.22	22.87
Fat	5.55	11.54
Gelatine	17.30	27.99
Phosphates	12.42	32.77
Insol.-animal matter	17.51	4.83
	100	100

From this table we may learn that more gelatine will be extracted by high pressure, when we consider its amount, and when we take into view the facts we have previously adduced.

From the experiments of the commission, we learn no more than we previously knew, viz., that animals are incapacle of subsisting upon the exclusive use of an elementary animal principle. The experiments of Donné and Gannal had proved this in relation to gelatine; but the researches of Edwards had shown, contrary to what the commission seem anxious to admit, that gelatine when administered in conjunction with other articles of diet, may serve for the purposes of nutrition. Gelatine extracted from bones by the action of water is, according to the commission, less nutritive than gelatine extracted by the use of acids. When gelatine prepared by the former method was presented to dogs, some of them partook of it once or twice, while others preferred rather to die than touch it. If the bones were digested in acid, and the residue dissolved in water, dogs lived upon it for a month and were well nourished, especially when the bones were those of sheep's feet; but after this period they exhibited a dislike to this meal. In the choice of acids we find that it is not a matter of indifference which we employ; for by acting upon gelatine by nitric acid, we have procured by distillation by no means inconsiderable traces of prussic acid. Muriatic acid appears to be, considering all circumstances, the most convenient for the object in view. We believe, therefore, that gelatine procured by the action of acids, might be employed advantageously as the basis of soups; but we conceive that the facts previously adduced are sufficiently condemnatory of the process of extracting gelatine from bones by long-continued high-pressure steam.

It would be of essential advantage to the poor, if attention were bestowed on such methods of preparing a cheap and efficient nutriment. We believe that, at least in the present condition of the country, especially among the poor inhabitants of towns, a comfortable meal can rarely be procured; and that it would be highly advisable to form institutions where poor laborers might be supplied with a cheap meal at their own cost. Under these circumstances it would be nececssary to employ cheap materials. But care should be taken that they are of a wholesome and nutritious quality. For this purpose it would be essential that they should be superintended by individuals qualified to judge of the qualities of food, and acquainted with the chemical principles necessarily connected with the various processes employed in preparing and cooking the various articles of diet. We should recommend, also, that greater variety in the routine of the dietaries should be inculcated. The poor ought not to be fed like the inferior animals, continually upon the same materials. We are convinced, from the proposed improvements in the dieting of the Glasgow poor, that the dinner may be different on each successive day; and that the industrious laborer who constitutes the sinew of the country, may, in his declining years, be treated more in conformity with that class for whose comforts his best energies have been spent, and for whose existence his wellbeing is essential.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, September 17, 1842.

As the period, when our medical institutions commence their winter course of lectures, is now approaching, we deem it proper to offer a few remarks relative to the present state and prospects of medical education in this city. New York, confessedly, presents many facilities to the student in the acquirement of his profession. There is a wide and prolific field here, although far from being sufficiently cultivated. Still, however, there are encouraging prospects for the future, and we believe we may safely assert that the diligent student cannot acquire a more respectable education in any other city, than that which he can obtain in this,—the metropolis of the Union. The vaporing bravado of the Stuyvesant Institute Faculty has, at least, had the good effect of directing more general attention to the advantages offered here; and after the experience of the last year, students can have little difficulty, on their arrival in our city, in making those arrangements for the prosecution of their studies, which will afford the surest ground of hope, of attaining practical knowledge and future respectability. Nevertheless, it will not, we humbly conceive, be regarded as unbecoming the character of a faithful journalist, to subject the medical institutions of this city to an impartial review, and thereby render salutary advice, alike to the teachers and those who come to be taught.

There are now in New York two Medical Schools,—the College of Physicians and Surgeons, and the Stuyvesant Institute School. The former has maintained, with varying fortune, an existence of upwards of seventy years,—the latter is a twelvemonth old. Somehow or other, there *is* an influential dignity in the sober vestments of age, and young candidates for the world's favor,—albeit very decent characters,—splutter and bluster they ever so vigorously, are obliged to admit that years give the most current certificate of respectability. All this is particularly true with respect to literary and scientific institutions for the instruction of youth; and the Faculty of the Stuyvesant School, like sensible men of experience as they are, are perfectly aware that a medical college of a few months' standing, and without any remarkably flattering prospects of future stability, occupies a very different position from that of institutions which have stood the test of time,—given to the profession many illustrious names,—and established a solid reputation for usefulness and respectability. Students don't like to obtain diplomas from 'Universities' which came yesterday into existence, and which on the morrow may be numbered with the things that were. In this point of view, then, the College of Physicians and Surgeons has a decided advantage over its juvenile neighbor.

Again, we must accord the palm of superiority to the College, with respect to the possession of facilities of affording clinical instruction. It is altogether unnecessary to insist in this place, on the importance,—the indispensable necessity, in fact, of ample clinical instruction in a course of medical education. Attendance on lectures, however diligent and protracted, and however erudite and sound the lecturers, can never make a physician or surgeon. The Stuyvesant Faculty cannot themselves regret more than we do, their lamentable inability to give efficient clinical instruction to their pupils. If they had the control of any Hospitals or Dispensaries, to which they could introduce their students, the Stuyvesant Professors could much more successfully compete with the College, which has so adroitly managed to monopolize the facilities of communicating a practical knowledge of diseases and their appropriate treatment. True, a *clinique* was opened at the Stuyvesant School shortly after its organization, but was, incredible as it may seem, abandoned in the middle of the session, when the students were in attendance! A painful series of disputes between Dr. Mott and his venerable colleague, Dr. Pattison, were indeed, alleged in palliation of this extraordinary procedure; but, surely, of two evils the Faculty should have chosen the least. What if rival Professors did quarrel, should the poor students on that account have been starved,—robbed of the choicest pap which they sought from their Alma Mater? Ah! we cannot readily forget the melancholy aspect presented last winter by the young men, who thirsting for knowledge, but denied it by the hard-hearted Faculty of the Stuyvesant, modestly sought it at the crowded *cliniques* of the College in Crosby-street! And we must say that the tenderness with which that venerable institution, exclaiming

> 'O ——— tempus in ultimum,
> Deducte!'

received the deserted offspring of the Stuyvesant, was worthy of everlasting record.

The Stuyvesant School has, in addition to its other misfortunes, incurred the dislike of a large portion of the profession in this city. This calamity has been owing in some degree to the uncourteous manner in which the Faculty treated several of their brethren who had made arrangements for giving a spring course of lectures. We have adverted, in proper terms, to this subject, in a former number of our journal. Drs. A. C. Lee, Stewart, Alfred C. Post, and others, retain a lively recollection of the treatment they received on that occasion, and can we wonder that they exhibit a little bitterness of feeling? The College of Physicians and Surgeons, on the other hand, manifested, as we feel pleasure in stating, a really tolerable degree of liberality towards their professional brethren.

Then again, as if to furnish another illustration of the touching exclamation—

> 'Oh! Gertrude, Gertrude,
> When sorrows come, they come not single spies,
> But in battalions!'

all the students of the Stuyvesant Faculty, who presented themselves for admission into the naval medical corps, were rejected! More in sorrow than in anger, we chronicle this fact. Far be it from us to irritate, in unfeeling sport, this highly vascular spot in the feelings of our friends of the Stuyvesant! Still we must declare the truth, yea, publish it from Dan to Beersheba, so that all concerned may deduce from it the appropriate moral. Yet, after all, let us in charity suppose that this Faculty done all that they could; the apologetical statement that as the poor students had so few opportunities of attaining sound knowledge in the ward and in the operating theatre, their rejection at the Naval Board was not surprising, should certainly be allowed due weight. But then is it just and honorable to subject students to the mortification, attendant on such a discovery, of the incomplete and inadequate nature of this course of instruction? Would it not be better for all parties, were the following statement to be appended to the circulars of the School—'Students qualified to pass the green-room of the Stuyvesant, but not the Navy or Army Boards?'

It would be unpardonable to omit, on the present occasion, reference to the exhibition of their zealous solicitude for the advancement of 'pharmaceutical science,' with which the Stuyvesant Professors favored us in their last circular. It appears, as one of our leading newspapers has remarked, that 'if this Faculty cannot educate their students so as to enable them to pass the Naval Board, they will, at all events, make amends by teaching them how to manufacture mercurial ointment and administer a clyster.' The Stuyvesant Faculty, after remarking, with their accustomed grammatical accuracy and felicity of expression, that 'though, from the nature of the case, a large proportion of the Practitioners of Medicine in the United States must act as their own apothecaries, yet no arrangement is made for instruction in this indispensable department,' go on to say,—'Ignorant often of the aspect and other distinctive characters even of the most common drugs, they are constantly liable to have imposed upon them defective and spurious articles: while many have never had an opportunity of assisting *at* the *preparation* of a tincture, infusion, or *other most common manipulation* of Practical Pharmacy.' 'Assisting at the preparation of other most common manipulation!' Remarkable preparation truly! But the Professors proceed,—

'To obviate this great defect, the Faculty have made arrangements with Messrs. SANDS, practical druggists and apothecaries of this city. Dr. SANDS will explain the qualities and tests by which the genuine are distinguished from spurious articles, with samples of each illustrating the most common impositions practised, the means of detecting them, and their real as well as marketable value.' 'Real as well as marketable value' of 'the most common impositions practised!' We have no doubt, after an inspection of the numerous advertisements published by this same Dr. SANDS, that he is admirably qualified for the discharge of the interesting task assigned him by the Faculty. The students, it is to be presumed, will be taught the 'real as well as marketable value' of the 'Infallible Remedy for Salt Rheum'—'The Sarsaparilla Panacea,' and other valuable 'manipulations of Practical Pharmacy,' to use the singularly accurate terms of this erudite 'Faculty.' But a truce with this blundering circular. Are the members of the Faculty really so silly as to suppose, that having let a part of their building to a druggist, in order to obtain his aid in the payment of the rent, they can gull the profession and the public into the belief, that a great school of 'Practical Pharmacy' has been established? Oh! no, old gentlemen, this won't do. You have only exposed another 'great defect' in your school—the want of a competent Professor of Materia Medica. The students will be great blockheads, indeed, who prefer the 'familiar' lessons of 'Dr. Sands,' to the erudite and philosophical lectures of Professor BECK.

But enough has been said to place the 'Stuyvesant School of Medicine and Pharmacy' in a proper light. The College of Physicians and Surgeons labors, we know, under several disadvantages, but it is still infinitely superior to its ricketty rival. And as the establishment of a private, practical school has just been announced, under the most favorable auspices, students coming here can have little difficulty, in making a safe and reputable choice of preceptors. In the private school, we have no doubt that the deficiencies of the College will be supplied, and that that *practical* knowledge of medical and surgical science will be communicated, which can alone render a man properly qualified to discharge, with honor to himself, and advantage to his patients, the solemn duties of his profession.

We observed the other day in one of our leading journals, some rather sarcastic allusions to what it was pleased, in a somewhat unfeeling manner, to term 'the past migratory career of Dr. Granville Sharp Pattison.' Now, it may be very true that this gentleman has figured at sundry times, and in diverse manner, in some half dozen cities on both sides of the Atlantic, but we are not sure that any inference to his disadvantage must necessarily follow from that fact. On the contrary, such a career exhibits a remarkable illustration of indomitable perseverance, and unconquerable hardihood. Many men after the reception of that unpleasant *shampooing* which is administered *a posteriori*, would anxiously seek 'a lodge in some vast wilderness,' and gain the friendly covert of 'some boundless contiguity of shade;' but here is the astonishing spectacle of a man, who manifests a stoical indifference to buffets,—makes, whenever required, a polite exit,—and when driven from one city—flees unabashed to another!

Professor BEDFORD, otherwise known as the 'Phènomenon,' has been, we have heard, very industrious in his efforts to defame the personal character of the conductor of this journal. Poor man! We think we yet see him, as with visage blank and tearful eye, he came to us, after our exposure of one of his disgraceful plagiarisms, and begged us with a profane exclamation, 'to spare him!' We cannot trouble ourselves with the creature. He is incorrigible, and we remember the adage—

'To lather an ass's head is only wasting soap!'

THE MEDICO-CHIRURGICAL REPORTER.

Ligature of the External Iliac Artery for Femoral Aneurism.

BY WILLIAM POWER, M. D.,

One of the Attending Physicians to the Baltimore Almshouse Hospital.

Christopher Daly, a native of Baltimore County, æt. 61, entered the surgical ward on the 1st of July; a man of stout frame, very youthful appearance for one of his years, and enjoying excellent health with the exception of the aneurismal disease for which he came to the hospital. He is a hard working field laborer, and with some intermissions this has been his calling from youth to the present time. He was a soldier during the last war stationed at Craney Island, and from thence was transferred to the station in West Florida where he spent six years. Here he had a bilious pleurisy, and this was followed by an intermitting fever which lasted for a long time, and did not leave him until he returned to his home in Maryland. For the last fourteen years he has enjoyed good health, uninterrupted by an attack of any sort unfitting him for his daily labor. About fifteen months ago, according to his best recollection, his attention was first accidentally called to the aneurismal tumor whilst digging in a ditch, and standing in water, though with his feet well protected. Placing his fingers upon it, he says he 'distinctly felt a pulse, but thought it was in a very strange place.' As it gave him no pain or inconvenience, he thought it was nothing serious, and continued to work on as usual.

About a month had elapsed from this time, when he was suddenly seized with violent cramps in the diseased limb, and finding exertion painful he stopped his usual employment, but assisted during the following harvest in the lighter kind of field labor. The limb was slightly swollen below the tumor when he first discovered it; but after the attacks of cramp, which were from time to time repeated, the swelling increased, together with a sense of numbness diffusing itself over the whole leg. The tumor has steadily continued to increase together with the œdema of the leg. He has for the last eleven months kept quiet and strictly avoided all exertion, and has undergone no treatment until he came under our care. The aneurismal tumor was situated in the right groin immediately below Poupart's ligament, which was forced a little upwards in an arched form. It was of an irregularly rounded form, about three and a half inches in its perpendicular, and three in its transverse diameter—pointing a little upwards and inwards where the pulsation was more distinctly seen and felt than elsewhere. Its pulsation was evident to the eye—communicated a distinct thrill to the hand when laid upon it, a *bruit de rape* to the stethoscope, and the pulsations were eccentric. Compression upon the iliac artery, on the psoæ muscles, arrested all pulsation in the tumor. The external iliac for an inch above the tumor felt larger than the artery of the opposite side, and both here and in the continuation of the femoral below the tumor, gave a distinct file-sound to the stethoscope. The lymphatic glands of the groin were swollen and hard—the leg was one third larger than that of the opposite side—purplish in hue, one degree higher in temperature, affected frequently with cramps and pain, with a sense of numbness over the knee and instep.

Tongue clean, appetite good, bowels regular—skin pleasant, pulse 80, natural, sounds of the heart clear and distinct, chest every where resonant, respiratory murmur vesicular, no ossification of the arteries at the wrist. The rest and quiet of the hospital reduced in a degree the œdema of the leg, and caused the tumor to appear more prominent. He was placed on mild diet, and one or two gentle aperients administered. His health remained undisturbed, and his spirits good up to the 19th of July, when, assisted by my colleague, Dr. Annan, and in the presence of several medical friends, the following operation was performed:—

An enema having been previously administered, and gutt. lx. Tr. opii, given an hour previously, the patient was placed upon a suitable table, his pelvis inclining towards the left side, and an incision made through the skin and common integuments of three inches and a half in length, extending from three-fourths of an inch to the inside, and on a level with the antero-superior spinous process of the ilium, with a curve presenting downwards to about three-fourths of an inch above the external ring—a small vessel running to the skin was divided in the inner angle of this wound and secured. The glistening fibres of the fascia of the external oblique were then divided, according to a suggestion in the last edition of Dr. N. R. Smith's work on the Arteries, in the same direction, but a half inch above Poupart's ligament. I now attempted to pass my finger under the edge of the external oblique and fascia transversalis, but found the border of the fascia of the external oblique presented such obstruction to free manipulation, by its resistance, that, to facilitate my further progress, I was obliged to divide it with a buttoned bistoury, thus making a T incision in this fascia. The finger now passed readily down on the outer side of the internal ring, avoiding the cord, and after a little dissection with the nail, came in contact with the artery. Fearing, however, the soundness of the coats of the vessel thus low down, the sac of the peritoneum was gently pushed upwards and separated from the fascia transversalis for an inch and a half; and this membrane, together with the fibres of the internal oblique and transversalis divided by a buttoned bistoury on the finger for three-fourths of an inch. This sufficiently enlarged the wound for easy manipulation. The finger sought the artery about three inches from Poupart's ligament, and with one of Professor Gibson's needles, armed with a ligature of two strands of sadler's silk, waxed but not twisted, an attempt was made to pass it from without inwards; finding the curve of the needle so great that I could not depress the handle sufficiently on the abdomen, I cautiously separated with the nail the vein from the artery, and passed it from within outwards. The ligature was then drawn tight with some difficulty at this depth, my assistant pressing on the knot until the second was tied. The pulsation immediately ceased in the tumor. The wound was brought together by two points of suture and a few adhesive straps. The operation lasted twenty-five minutes, and was borne extremely well by the patient. The patient, after the wound was dressed, was carried into a well-ventilated room, and placed on a bed with the limb of the side operated upon well flexed on the pelvis.

Complains only of fatigue and numbness of the right limb, with dull pain of the loins and hypogastric region—pulse 80, natural—at 7 P. M. Temperature of right foot, as tested by the thermometer, seven degrees lower than that of the opposite side—gave Tr. opii, gutt. xxx.

July 20th. Patient rested tolerably during the night—slept nearly four hours—countenance cheerful—some nausea and anorexia. Pulse 80, as yesterday—skin pleasant, complains of dull pain in the loins, and some cramps in the leg. Tumor decreased one-third in size—hard on its external side, slight pulsation at its inner and upper portion. Right leg florid, only two degrees lower in temperature than the left—ordered venesec. 14 oz. ℞. Morphiæ acet. gr. ij. aquæ camphor, ℥iv.—dessert spoonful every two hours. Towards evening his pulse rose to 114. Takes barley water made cold with ice.

July 21st. Appearance much altered—countenance anxious, haggard, eyes sunken and suffused—voice weak—nausea, constant retching—complete anorexia. Tongue reddish along the edges, thirst, skin bathed in perspiration—pulse 140, small—abdomen tympanitic—complains of sharp pain along the recti muscles, in the right iliac region and about the loins—bladder irritable, trying to make water every ten minutes—venesec. oz. 14. ℞. Calomel, grs. xv. pulv. opii grs. ij. Added two drops of hydrocyanic acid to each dose of the solution of morphine—40 good leeches applied to the abdomen. At 7 P. M. the leech-bites were still running freely, and had afforded great relief—pulse 130—blood drawn this morning well buffed—still restless—continue anodyne. Tumor as yesterday. Temperature equal on both sides.

July 22d. Countenance much improved—pain and uneasiness much less—abdomen still tympanitic—no movement of the bowels—pulse 125, fuller but soft—tongue moist—thirst less, and asks for food. Still complains of pain in the back and abdomen—bladder still irritable—venesec. 8 oz. ℞. Cal. and opium as yesterday—hop fomentation over abdomen. 7 P. M. Still improving—skin pleasant—demands food—no passage—blood drawn in the morning lightly buffed—the bleeding made a sensible impression upon his pulse, ℞. Cal. grs. viij.—opii. gr. j.—chicken water, and milk iced. Continue solution.

July 23d. Passed a good night, and makes no complaint this morning excepting of his bladder—abdomen much softer—skin pleasant. Pulse 96, soft—tongue clean, no stool—little thirst—wound gives no pain—an erythematous blush surrounding it for some inches—complains none of the limb. ℞. Sal. rochelle ℥j. aqua ℥viij.—wine-glassful every hour. 7 P. M. Bowels not moved—complains of flatus—ordered a simple enema.

July 24th. Looks as well as before the operation—makes no complaint—pulse 90, soft—tongue clean—peritonitis fairly subdued—and we looked forward to a happy result. Waking from a sleep at one o'clock, he turned over in bed; his nurse a few minutes after was struck by his respiration and altered facies, and a quantity of blood in the bed. I saw him a few moments after—pale, restless—pulse scarcely perceptible, almost unconscious—his bed floating in blood—between two and three quarts. The hæmorrhage had ceased—a compression was laid over it—nor did it return—he sunk rapidly, and died about 7 P. M. It was not deemed advisable to make any effort to secure the vessel, as the slightest shock would have determined dissolution under our hands.

Autopsy 18 hours after death—weather very warm. Head and face purplish, features swollen, bloody serum exuding from eyes—slight greenness about the clavicles and abdomen, rigidity considerable, muscles large and firm. The lips of the wound were united excepting for a half inch on either side of the ligature—this space occupied by a clot of blood—the points of suture had held firmly, and there was no disturbance of parts.

The abdomen was opened by incisions from the umbilicus to the pubis and to the edge of the ribs. Their flaps turned down exposed the peritoneum. There was no effusion of serum, no adhesions; but over the tract of the artery extending upwards towards the kidneys, and down into the pelvis to where the peritoneum invests the bladder, this membrane in a space equal to the size of the hand, was of a bluish livid tint, more wrinkled than elsewhere, as if lightly parboiled, presenting numerous whitish yellow points which could be scraped off with the nail—some flakes as large as a half dime. The membrane was firm, no adhesion with the intestine. The peritonitis had been local and was entirely subdued. The adhesions of the lips of the wound were then torn open—the skin and cellular tissue were the only parts adherent. The blood confined in the wound had insinuated itself upwards for some distance between the fascia transversalis and the peritoneum, as well as between this membrane and the fascia iliaca; about four ounces of clotted blood were removed from the wound. The artery was then exposed and found with the ligature around it; when pressed upon, blood came from an opening immediately under the knot. It was then carefully dissected out and removed, from Poupart's ligament to the bifurcation of the aorta, and laid open, as well as the external iliac of the opposite side. They were equal in size, at least one-third of an inch in diameter—the inner coat of a creamy-yellow hue, a little rough. The inner coat where the ligature had been applied, on the posterior half of the artery, was wrinkled and crimped so as to be smoothed out with some difficulty, but was not cut through, nor was there any effusion of lymph. On the anterior part was the opening—at least one half the circumference of the vessel. The edges a little ragged, of a purplish hue, within a quarter of an inch of the opening—friable and breaking easily under the nail. The outer coat was livid to the same extent—softened and more friable than the rest of the vessel; a soft clot below, but none above the ligature. The vein perfectly sound, no further separated from the artery than by the needle in passing the ligature; this was applied about an inch and a half below the bifurcation of the common iliac and about the same distance from the origin of the epigastric. The tumor in the groin was next laid open and cleansed of its clots. It was about three inches in each diameter, the anterior wall formed by the fascia lata, its lateral and posterior walls by the muscles of the thigh, irregularly anfractuous. The profunda, which was given off very high up, immediately under Poupart's ligament, formed a portion of its posterior boundary. The artery for an inch above where the tumor commenced was filled with osseous concretions, grating under the scalpel, and pricking the fingers. The continuation of the superficial femoral where it emerged from the tumor, from the number and regularity of the circular atheromatous bands, looked more like the trachea than an artery. The aneurismal tumor was very thin and prominent towards the upper and inner part of the thigh. It contained between four and six ounces of soft black clotted blood, and as much firm fibrin arranged in layers penetrating into the anfractuosities of the tumor.

The arterial system was every where well developed—these vessels having more than their usual calibre. The heart was large and flabby, its walls thin, a little fatty; the valves all sound—aorta not dilated—other viscera of the chest and abdomen healthy. Head not examined.

Remarks.—The above case is reported with the hope that its perusal may prove profitable to others, called upon to perform a like operation; as well as with a view to contributing another fact which may serve to elucidate the true causes of secondary hæmorrhage. Few cases resulting unfortunately are made known to the profession; and yet it is mainly from the study of these that we must learn what conduces to success or failure. The causes of secondary hæmorrhage are yet far from being well understood; and to enable the surgeon to guard with more certainty against this accident, a number of cases like the present must be brought together with their details; compared and analyzed. It is an easy matter to say the coats of the vessel were not sound, and consequently unfitted to bear well the application of the ligature. By such a sweeping assertion all blame is thrown from the shoulders of the operator, but a candid mind will naturally seek for the existence of other causes, and faithfully detail whatever may tend to throw light upon these. The condition of the vessel a short distance above, and for some distance below the tumor, in the present case, was unnatural, there can be no doubt, and though at the point where the ligature was applied its inner coat was wrinkled and thickened, still it was here as healthy as the external iliac of the opposite side, and it does not appear that this in itself could have been the cause of the hæmorrhage; for the outer coat maintained its natural appearance and properties. There was no unnecessary violence used with the artery during the operation, nor was it denuded to any greater extent than was absolutely necessary to admit the passage of the needle, so that ulceration or gangrene of its coats from destruction of the *vasa vasorum* was out of the question. There was no appearance of suppuration in or about the wound at any time, but on the contrary, this seemed to have every disposition to heal kindly. Hence the walls of the vessel could not have been softened by being bathed in pus surrounding them, nor did the peritoneal inflammation seem to exert any pernicious influence external to the sac of that membrane. The effect which the active treatment used to counteract this peritoneal inflammation may have had in preventing the effusion of lymph and the formation of a proper coagulum, by diminishing the richness and plasticity of the blood, is a question which, in the present state of our knowledge, it is not easy to solve; but were the same symptoms present in another case, the same treatment would be employed, for it would be highly improper to let a patient incur imminent danger from one cause, when the effects of the means used to combat it upon another danger are at most only problematical. None of the above items therefore are entitled to much weight in our estimate of the causes of secondary hæmorrhage in this case.

The ligature made use of in the operation was composed of two threads of sadler's silk, waxed but not twisted, thus forming a flattish band; it was applied with the extremities of the fingers at the bottom of a deep, narrow wound, at great mechanical disadvantage. I did not feel the inner coats give way, and therefore renewed several times the traction upon the ends of the thread, with as much force as could be applied under the circumstances; thinking the coats might have yielded little by little under these successive efforts, and finding the pulsation below the point of its application entirely arrested, it was secured by a second knot. On examining the vessel, the inner coats of that half of it which was not ulcerated through, were found wrinkled and crimped closely, these folds held together by delicate bands, and smoothed out with much difficulty, but not cut through. According to the experiments of Jones, in his admirable treatise on hæmorrhage, this sort of incised wound through the inner coats, is the main source from which the coagulable lymph is derived, which is the effectual cause of closure in an artery to which the ligature has been applied; and this adhesion from coagulable lymph takes place in dogs and horses a few hours after these coats have been thus divided. Granting the force and weight of Jones' views, still the non-section of the inner coats is not an absolute reason why the adhesive or obliterating process should not take place. Many surgeons have held the doctrine, that a force barely sufficient to keep the two surfaces of the inner coat in contact is sufficient to develope this adhesive inflammation; and they have devised different modes of applying the ligature with the express view of sparing these coats, and thus lessening the chance of secondary hæmorrhage. Though success has followed in many instances the application of ligatures where the inner coats were not divided, still the weight o testimony is in favor of the doctrine of Jones; and doubtless the want of a perfect division of these was one cause of the fatal result in the case now under consideration.

The redness, softening, and ulceration had taken place on the anterior part of the vessel immediately under the knot, in a space equal in extent to a quarter of a dollar around the ruptured part. The irregular compression of the knot may have determined the softening, &c., in this spot rather than in another; but it is right to state that both my assistant and myself had, on the morning of the operation, examined the body of a female who died with tubercular peritonitis. Dreading some unpleasant consequences, I had washed carefully three times before operating, yet without getting rid entirely of the cadaveric odor, which was more evident on my assistant's hands than on mine. His finger was pressed upon the knot, and may it not be that a specific inflammation, ulcerative in its character, may have had some relation with this cause? The pathology of morbid animal poisons is not well understood—but subjects dying with serous inflammations have been regarded as more likely to produce poisoned wounds than others. In puerperal or other acute peritonitis, there is no doubt of the envenomed character of the products of inflammation causing dangerous wounds when applied to abraded surfaces. With regard to tubercular peritonitis, the facts are not so notorious; still this, though a problematical cause, deserves to be considered.

During the peritonitis the patient was restless and changed his position more than was desirable, thus causing the artery to be more fretted and rubbed by the ligature than it would otherwise have been; and the immediate cause of rupture was turning himself in bed. Notwithstanding the generally received doctrines, it appears to me that the facts we possess in relation to this subject, are not sufficient to form a just estimate of the propriety of applying two ligatures, and dividing the vessel between them. This would seem, *à priori*, to place the vessel in a condition approximating more to that of arteries in stumps, where secondary hæmorrhage is comparatively a rare accident. In operations upon the external iliac in particular, which is loosely imbedded in cellular tissue, and more affected by motion of the leg and trunk than the superficial femoral or other vessels bound down by muscles, I think the old practice or theory, of J. Bell, Abernethy, and others, of dividing the vessel, suffering it to retract in the cellular tissue, thus relieving it from strain, and ensuring more certainly an effusion of lymph, and its consequent adhesion, before the ligature should have ulcerated through its coats, might render the terrible accident of secondary hæmorrhage less likely to occur.—*Maryland Med. and Sur. Jour.*

M. Colombot's Method of Reducing Dislocations of Orbicular Joints.

Professor Williams, of Dublin, thus describes M. Colombot's method:—'In place of practising graduated extension by any mechanical force, all the muscles surrounding the joint are placed in an intermediate state between flexion and extension, so that they may be in the greatest possible state of relaxation; they are then to be taken by surprise, by suddenly rotating the limb, a manœuvre which infallibly replaces the head of the displaced bone.'

When the hip joint is implicated, the reduction is to be effected as follows:—'The patient is placed erect, the weight of the body being supported on the sound limb; the trunk is then flexed, so that the thorax rests on a bed or table corresponding to the height of the pelvis, and the patient grasps with his hands the opposite edge of the bed or table with the view of fixing the trunk.'

'The surgeon stands behind the patient, on the inner side of the affected limb, if the displacement is anterior to the cotyloid cavity, external to the limb if the case be one of posterior dislocation; the dorsum of the foot is grasped with one hand and the leg is bent on the thigh; while with the other hand placed in the popliteal region, moderate pressure from above downwards is exerted, so as to put the muscles insensibly on the stretch. The limb is at the same time directed somewhat from within outwards and from behind forward in order to dislodge the head of the femur from its new situation and render it moveable.'

'The surgeon now promptly communicates to the thigh an orbicular motion, rotating it circularly, from within outwards or from without inwards, according as motion in one or the other direction may be more conveniently effected, and the head of the bone re-enters its articulation with a snap. By this process the head of the femur is replaced in the cotyloid cavity, which becomes the centre of the motion of circumduction.'

Six cases are detailed, in which dislocation of the hip was reduced by the method here described. And in the same volume it is stated that M. Lefebvre has employed M. Colombot's plan with the greatest success, not merely in recent cases, but in dislocations of the hip-joint which had existed for two months and even for a year. The number of cases on which M. Lefebvre operated is not, however, mentioned, nor are any of the cases given in detail, an omission which, of course, materially lessens the value of the statement respecting M. Lefebvre's experience, and which is to be particularly regretted as regards the cases of dislocation of long standing, in which this simple method of reduction is alleged to have been successful.

[Professor Williams brings before the Surgical Society of Dublin, two interesting cases where the above practice was adopted, and in one with perfect success. It becomes a question, therefore, whether the mode of reduction almost universally adopted, namely, by extension and counter-extension, may not be too implicitly relied upon; for we cannot forget that in dislocations of the femur for example, the direction communicated to the head of that bone, and the mode of impelling it in a suitable direction, although by no means overlooked, are often regarded as secondary considerations, the extension and counter-extension being chiefly considered: in these cases traction is often exerted in a direction not *materially* deviating from the parallelism to the axis of the body.]

As to the position in which the limb should be placed, while traction is being performed, theory clearly indicates that the thigh should be flexed on the pelvis, and the leg flexed on the thigh, inasmuch as this great obstacle to the reduction of the dislocation is muscular resistance; and this obstacle is manifestly diminished in proportion as we succeed in relaxing the muscles. But the double flexion of the thigh and of the leg effects this object in a very remarkable degree; the greater number of the muscles of the thigh being thus relaxed, because their fixed points are approximated, and the powerful triceps does not come into play, inasmuch as all its attachments are inferior to the hip-point. Surely this simple and painless method of *obviating* muscular power is far preferable to *overcoming* the same force by the employment of the warm bath and venesection, the administration of tartar emetic, and the application of mechanical violence. Morever, flexion of the limb tends to keep the muscles relaxed *while traction on the limb is being made;* whereas if the force is applied while the limb is itself extended, (that is to say, in a position more or less parallel to the axis of the body,) the mechanical traction tends to put the muscles still more on the stretch, and thus excite them to a more energetic resistance.

If it be true that flexion of the thigh and of the leg relax those muscles that are the chief obstacles to reduction, the second point under consideration may be briefly disposed of; for if the force to be overcome is thus diminished, the amount of traction necessary to antagonise that force may be proportionally dimiuished also.

The position of the limb most favorable to relaxation of the muscles is fortunately the position also most favorablo to coaptation, for flexion of the leg upon the thigh gives us a powerful lever (consisting of the entire length of the leg) which may be made of the most essential service in directing the head of the dislocated bone into its articular cavity.

These theoretical considerations would, of course, be of no weight, unless borne out by practical experience; but we find that many eminent surgeons have given more or less sanction to the principles for which I contend; and there are numerous cases on record showing that by their application dislocations of the femur may often, at least, be reduced with a facility which contrasts very favorably with the results of the ordinary method.

Hey and Kirkland (Hey's Practical Observations in Surgery, 3d Edition, p. 320,) adopted the method of flexing the thigh on the pelvis, and the leg on the thigh, making use of the entire length of the leg as a lever to rotate the thigh, in dislocations of the femur into the thyroid foramen; but neither of these eminent surgeons extended those principles to the reduction of dislocations of the femur on the dorsum of the ilium.

THE COLLATERAL SCIENCES.

On the Formation of Contagious Confervæ on Living Frogs.

BY DR. STILLING.

The object of this paper is to prove that the formation of conferva-like tubes on frogs is not to be regarded, as it is by Hannover, as the result of a vegetable contagion growing in the water, but is nothing more than the development of infusoria from ova, which, being most probably derived from external sources, come in contact with an organic substance that is undergoing decomposition, and then become the seat of new vital processes.

The author says he saw the conferva-like tubes just as Hannover [Brit. and For. Med. Rev., vol. IX. p. 550] describes them. The black granules were at first contained within the tubes, but afterwards were extracted from them and adhered in tufts to their exterior. By long and careful observation he saw how, in the tubes which enclosed the granules, all was at first unmoved, but soon, at various intervals within them, rapid currents began to move in them, as if certain parts of a firm gelatinous substance had suddenly become very thinly fluid; and how this fluid made for itself a way through one end of the tube, and flowed out of it. The black granules were moved in various quantity with these currents, and often flowed with them out of the tubes; but the most striking phenomenon was the independent motion of the black granules, of the reality of which, as well as of its difference from the ordinary Brownian-molecular motion, tho author and many others repeatedly convinced themselves.

Theso granules were repeatedly seen to move pretty rapidly in all directions, through certain spaces of the tube, but not commonly through its whole length at once. It appeared as if the contents of the tubes at the parts which contained the moving granules were more fluid than at the parts where the granules lay immoveable, as if imbedded in a denser jelly. A heap of these granules often vibrated very vividly, but still the motions of every individual granule could be observed separately from those of the rest, even though its movements were not considerable. Often too the granules were seen like little infusory animalcules moving from one wall of the conferva-like tube to the other, upwards or downwards, in short, in all possible directions through an extent of between one and two lines; and, although no locomotive organs could be seen, yet their motions were quite regular, and just such as would be produced by a regular motor apparatus, like that of mites. Nor were they confined to the interior of the tubes; they were seen to be still actively continued in portions of the jelly-like fluid that had been forced out of the tubes.

Further examination proved that in every conferva-like tube whose contents were in part evacuated, there was an innumerable multitude of small, straight, hair-like, semi-transparent, linear animalcules, apparently about a line and a half long, which presented an uncommonly vivid vibratory motion, and which usually lay with one end (the head) against the wall of tbe tube, and stretched out their bodies and tails at right angles away from it. They seemed, indeed, as if they had bored with their heads into the substance of the tube and derived their nourishment from it, while they were making the rapid vibratory motions with their bodies. They commonly adhered in heaps to one or more spots, or to the greater part of the circumference of a tube, and in the latter case they made it look as if it were beset with the finest, semi-transparent, whitish, needle-like crystals, or as if it were lined with portions of the finest glass-thread a line or two long. Their manifold motions clearly showed that they were living infusory animalcules.

On almost every occasion it was observed that some of the animalcules were swimming about, each in connection with one of the black granules that are contained in the conferva-like tubes. And this was so often seen that the author does not hesitate to regard the granules as the ova from which the hair-like infusoria are produced; nor to consider that the movements of the former depend on the latter being hatched and forcing their way from their cells, the last stage of the hatching being that in which the animalcule is seen, as just mentioned, moving about with one of the black granules appended to his tail.

But the degree of development hitherto traced out does not yet afford a complete history of these granules and animalcules. If the efflorescence from the frogs' toes, which presents the phenomena just described between the second and fourth days, be examined at a later period, many of the animalcules are found to be grown to three or four times their original size, but they are now bent into a horse-shoe shape, and at both their extremities have dark spots like the original black granules, but depending on the doubling up of their very ends. But at this time also there are a greater number of serpent-like infusoria of different sizes moving about, and the number of the original smaller vibrating animalcules is much diminished, or they have altogether disappeared. The author does not hesitate to regard the larger animalcules, which have the shape and rapid tortuous movements of snakes, as the representatives of the more perfect stage of development of the smaller hair-like kind. As soon as they make their appearance nothing but traces can be discovered of the conferva-like tubes; they seem by this time to have been completely broken up.

The author made several experiments on inoculation with these creatures. Small wounds were made on the backs of several salamanders, and into each was put a small quantity of the efflorescence from the frogs' toes, (i. e. from the toes of frogs on which the conferva-like tubes and their animalcular contents had been spontaneously produced after destruction of the lower part of the spinal cord.) On the second day the wounds were covered with a whitish substance, which gradually spread; several of the salamanders died and all became sickly. This white substance consisted of conferva-like tubes just like those that had been inserted in the wound; after four or five days it was all thrown off from the wound, complete cicatrization took place, and the animal recovered its health. Dead flies, placed in the same vessel with frogs that had any of this efflorescence on them, soon became covered with it without the aid of inoculation. A toad, into whose wounded back a toe thus affected and cut off a frog's foot was introduced, was found dead next day. On the whole the inoculation was more successful in salamanders than in frogs; among the latter it never succeeded unless they were previously sickly; the matter from dead animals was as efficient as that from the living.

To determine whether the formation of the conferva-like tubes were the result of putrefaction, or whether it were connected with the putrefaction of the blood, or produced from the latter or from the nervous substance, or derived entirely from other sources, the author instituted some further experiments. Dead frogs which had not during life been affected with the peculiar disease, were left to putrefy in water. In many, the conferva-like formation was produced and went through all its stages; in others, no trace of it could be found; but in all, as soon as the putrefaction had begun, a white granular substance formed in a layer on the surface of the water, which was found to contain the same black granules as were seen in the conferva-like tubes, the same serpent-like animalcules as had been found in the older conferva-like tubes, and the same islands of gelatinous animal matter, with the black granules and vibrating infusoria as had been already seen and described. The same productions were found in films on the water in which frogs' blood and nervous substance had been laid, although in neither case was there any production of the conferva-like tubes.

In his summing up the author concludes that the material which has been described as composed of confervæ is really not a vegetable, but an animal exudation taking place from the blood-vessels of a diseased part, in which, from defective nervous influence, or some other cause, the blood has stagnated, or moves very slowly. He cannot account for its taking the form of tubes, nor for some of the other anomalies which it shows in the kind of animals and circumstances in which it chiefly occurs; but, once formed, it constitutes the most favorable nidus for the development of the ova of this particular infusory animalcule; which ova, like those of other infusoria, must be regarded as constantly present among us in great numbers, waiting only an appropriate nidus in which to commence their further growth.—*Muller's Archiv.*

ITEMS AND INTELLIGENCE.

Members of the profession are requested to furnish medical statistics, facts, cases, &c., to the officers of the society for the collection and publication of medical intelligence, of which Dr. Goldsmith is president and Drs. Vache and Markoe, vice presidents.

Dr. Middleton Goldsmith has resigned his office of Prosector of Surgery in the College of Physicians and Surgeons in this city.

Books, &c. Received.

Proceedings of the Medical Society of the State of Tennessee. 1842. [Notice in our next.]

To Correspondents.

D. R. R. was too late for this week.

Several favors have been received, and will be duly attended to.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Sept. 10, 1842.

25 Men, 33 Women, 66 Boys, 64 Girls. Total, 188.

DISEASES.

Apoplexy	1	Intemperance	0
Asthma	0	Inflammation	0
Asphyxia	1	Of liver	0
Abscess	1	Of bladder	0
Abortion	0	Of brain	5
Bleeding	0	Of stomach	1
Bleeding from stomach	0	Of throat	0
Bleeding from uterus	0	Of lungs	5
Burned or scalded	1	Of bowels	3
Casualties	0	Of womb	0
Cholera infantum	49	Of kidneys	0
Cholera morbus	0	Insanity	0
Congestion of the Brain	1	Jaundice	1
Consumption	23	Killed or murdered	0
Convulsions	11	Lues Venera	0
Croup or hives	2	Mortification	0
Debility	0	Malformation	0
Delirium tremens	2	Marasmus	14
Diabetes	0	Measles	1
Diarrhœa	4	Old age	3
Death from poison	0	Organic disease of heart	3
Dropsy	2	Palsy	1
Dropsy in head	12	Rupture	1
Dropsy in the chest	1	Rheumatism	0
Drowned	2	Spinal disease	0
Dysentery	7	Suicide	0
Erysipelas	0	Sprue	0
Epilepsy	0	Small-pox	0
Fever	1	Scrofula	0
Scarlet	4	Teething	6
Typhoid	3	Use of laudanum	0
Puerperal	1	Unknown	2
Remittent	1	Ulceration of throat	0
Billious	2	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	1	Whooping cough	4
Fracture	1	Worms	0

AGES.

Of 1 year and under, 68; between 1 and 2, 41: 2 and 5, 15; 5 and 10, 4; 10 and 20, 4; 20 and 30, 18: 30 and 40, 10; 40 and 50, 11; 50 and 60, 7; 60 and 70, 0; 70 and 80, 8; 80 and 90, 1; 90 and 100, 0; 100 and upwards, 0; unknown, 1.

John H. Griscom, City Inspector.

City Inspector's Office, Sept. 12, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, SEPTEMBER 24, 1842. No. 13.

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons, New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XXI.

Pulmonary Emphysema—how distinguished from other diseases—treatment. Pulmonary Apoplexy—causes—diagnosis—treatment. Pulmonary Œdema—its pathology—treatment.

GENTLEMEN:—

You will remember the history I gave you yesterday,* of the disease now known as pulmonary emphysema, one of those diseases which modern pathology may be said to have created—that it is an hypertrophy and dilatation of the air vesicles, and nothing else; and finally, that it is the most frequent cause of those symptoms we usually class together under the term asthma. Now it would hardly seem possible that a disease so common and so well marked, could have so long escaped observation—but such is the fact; for, before the publication of Laennec's immortal work, enough was not known about it to enable practitioners to recognize it during life. Let us now continue our study of it, and see how it is to be distinguished from other diseases that bear some resemblance to it.

You will recollect that I told you in my last lecture, that obscure cases of disease of the heart, accompanied by difficult breathing, were sometimes mistaken for asthma or emphysema. You will remember also that the natural termination of emphysema is in enlargement of the heart—it is this which almost always complicates the case, sooner or later, and becomes a frequent and natural cause of its fatal termination. This being the fact, it is easy to understand that the symptoms of disease of the heart should follow by a long interval of time those of the original disease. Thus we find that the paroxysms of suffocation, the permanent dyspnœa, precede the existence of palpitation and of œdema. We find in the early examination of such cases none of the physical signs of enlargement of the heart—and even at a later period, when the two diseases exist together, the diagnosis of each is sufficiently easy. The early history of the case, the order in which the symptoms have been developed, will, as we have just seen, put us upon the right track—but the physical signs, particularly those of emphysema, are now well developed; and these are, as you know, dilatation over certain portions of the chest, particularly anteriorly and superiorly, drum-like resonance on percussion, and feeble respiration, with very likely some of the sibilant ronchus about the superior parts of the chest. The physical signs of enlargement of the heart I need not now repeat to you; I will only remark that one of them may be absent, viz. increased dulness over the precordial region; for if the emphysema extends to the lung in this region, it may produce even unnatural resonance over the part; and I may add, considerable dilatation of the parietes of the chest. Finally, the almost constant complication of chronic bronchitis in both these diseases may tend to confound them—and here a proper attention to the diagnostic marks of these diseases in a simple form, will very much aid you—still it is not always so easy a matter. Thus, where chronic bronchitis exists with disease of the heart, the supervention of an acute attack of bronchitis will bring on a paroxism very much like that of emphysema, constituting one form of suffocative catarrh. Again, simple chronic bronchitis may be mistaken for emphysema; but here the oppression of the respiration is trifling and constant, not liable to paroxysms unless complicated with disease of the heart, as just mentioned, or with emphysema itself, thus constituting what Laennec has called the suffocative catarrh; which is seldom, I believe, unless in very young children, an idiopathic disease but a complication. Again, in bronchitis we have none of the physical signs of emphysema, no dilatation, no increased resonance on percussion, or feeble respiration, especially about the upper part of the chest; but at most, a mucous rattle about the postero-inferior portions.

Finally, a pleurisy imperfectly cured, in which dulness, feeble respiration, and contraction of the affected side exist, may be mistaken for emphysema. Here there is commonly some cough, constant oppression, although slight, which is liable to much aggravation on an attack of acute bronchitis. But the physical signs so different in these two diseases at once clear up every difficulty. Let me here, however, caution you against one mistake. In these cases of pleurisy, the sound side is very resonant in comparison with the affected side, which is, as you know, dull on percussion; it is even sometimes unnaturally resonant, for the sound lung has actually increased in size, from the increased duty it is called upon to perform, the other lung being compressed. This increased resonance might at first strengthen our suspicions as to the existence of emphysema; but the moment you listen to the respiration, all doubt as to the seat and character of the disease vanish; for with this increased resonance on percussion you have increased respiratory murmur, puerile respiration, the reverse of the feeble respiration you have in emphysema.

I shall say nothing of the diagnosis of emphysema from phthisis, until I have described the latter disease. I wish you only to notice one fact, that most of those affections I have described as likely to be confounded with emphysema, viz. enlargement of the heart, or pleurisy, become complicated like emphysema with chronic bronchitis, and like that disease are liable to severe exacerbations of dyspnœa, caused by acute attacks, constituting a class of affections which may be called suffocative catarrh. Emphysema, when fully developed, is an absolutely incurable disease, although it may not materially shorten the duration of life. And here you may ask, is there not such a thing as nervous asthma, a curable disease? Perhaps there is—at all events, some of our best pathologists think so. Andral and Laennec* admit this form of disease, and this idea is confirmed by noticing that asthmatic patients sometimes apparently recover, or die without any marked lesion being found to account for the previous symptoms. I am inclined to believe myself that there is a form of asthma occasionally met with dependent on simple spasm of the bronchial tubes, marked by sudden and short paroxysms, and in which neither emphysema nor bronchitis, nor any organic disease, is distinctly recognized. There is no reason, however, to suppose that asthma, when dependent upon its common cause, emphysema, can be any thing more than suspended, its progress checked, and its symptoms mitigated. It is our object then to effect these results.

---

* [We did not hear the lecture thus referred to, but Dr. Swett embodies in the present discourse all that was said respecting emphysema.—Ed.]

The treatment of emphysema naturally divides itself into the preventive treatment, and that during the paroxysm. One great object is to check the progress of the disease, and this may be done by an attention to particulars which must be constant. The great thing to fear in the progress of these cases is that irritable and inflamed condition of the mucous membrane of the bronchi which leads to the paroxysms, increases the progress of the disease, and adds in every way to the discomfort of the patient. Every attention, therefore, must be paid to protecting the lungs from the irritation of catarrh. In some cases, where the means admit of it, a change of climate from a cold and variable temperature to a mild and equal one, is the best thing we can recommend. Most patients notice that they are comparatively well during the summer; it is the winter, and especially the spring, which they dread. Now I shall make the subject of climate in chronic pulmonary diseases the subject of particular attention when I speak of phthisis, and what I shall say there of climate in that disease, applies equally to this, except that patients with emphysema can probably bear a warmer and more moist climate with advantage than phthisical patients, and that they must remain in it much longer—indeed for life. The use of Jeffrey's respirator, an instrument which I shall one day show you and describe, is admirably adapted to the irritable lungs of the emphysematous, and will, I doubt not, render many a patient comfortable during the winter season, when before he was constantly contracting new catarrhs, and consequently new paroxysms of the disease.

But attacks of bronchitis are not the only, although the most frequent, cause of the paroxysms. Irritating substances, such as dust and the inhalation of peculiar odors, as ipecac. or new hay, will bring them on, and what is very remarkable, certain localities will induce them, without our knowing why. Thus one patient suffers only when in the city, another only when in the country and in a certain region of country. Of course, any such tendency must be avoided as soon as possible, by removing the offending cause. In these cases irritability and spasm of the bronchi is a predominating element.

I look upon the habit of sponging the chest every morning immediately after rising, and then applying the flesh brush freely, as one of the best means we possess of fortifying the chest,—of checking the disposition to bronchitis and to spasm. This was first suggested to me accidentally by a non-professional friend, and I have long been in the habit of recommending it. At first tepid water may be used, and the temperature gradually diminished; or it may be continued so, if reaction is not readily induced: but commonly water that has stood in the room over night will be warm enough. Let, then, your patient when he jumps out of bed in the morning get into a tub, sponge his chest a few minutes, rub himself very thoroughly afterwards, until a fine glow is produced; and let him, moreover, understand that he is to adopt this as a permanent habit to carry with him through life.

Patients affected with such irritable lungs should always be particular about their clothing. They, as indeed every one else, I think, in our climate, should wear flannel next the chest at every season of the year, suiting the rest of their clothing to the temperature of the weather, but taking constant care against exposure to sudden changes—to all the exciting causes of acute bronchitis.

Finally, the diet of emphysematous persons should be carefully attended to. Such patients will not unfrequently be found to be dyspeptic, and then every attack of indigestion, or the more permanent irritation of slighter gastric disturbance will infallibly aggravate the dyspnœa, increase the disposition to bronchial irritation, and thus hasten the progress of the disease. Here then is another illustration of the great fact I have so often insisted upon in these lectures—the intimate connection between the stomach and the lungs; and here is also a new illustration of the fact, that regimen properly attended to, is often far more useful in controlling disease than the most powerful remedies in the materia medica.

Let us now consider what is best to be done during the paroxysms. Remember what actually takes place during the paroxysm, what causes it, and you will know at once what is required. Some irritating cause induces an acute bronchial inflammation, this creates spasm and an increased secretion of viscid mucus, which varnishes over the mucous membrane of the bronchi; this is commonly the true and only cause of the paroxysm. Now, you would naturally think, if called unexpectedly to one of these cases, suffering so intensely as they do, that venesection might be useful. You try it, and it is so; for it diminishes the quantity of blood circulating through the lungs, and consequently the necessity for respiration to a certain extent; and it does more, it checks the disposition to spasm—thus it relieves. But take care how you abuse this remedy. Repeated use of it exhausts the vital powers, and may bring in its train other dangers very awkward to manage. Recollect that in all chronic diseases, there are two remedies which are very likely to be abused, viz., blood-letting and opium, and that in all cases we must look prospectively, as well as to the immediate benefit. I believe myself that blood-letting is seldom absolutely necessary or advisable in the treatment of these paroxysms, although, especially in the early stage, it may be a source of relief. The remedy which I would especially recommend in the early stage of those paroxysms dependent on acute bronchitis, is the tartarized antimony in doses just sufficient to create a little nausea. This diminishes spasm, brings on a more free secretion of mucus, and the patient is relieved. Ipecac. is a remedy of the same kind but of less power, and indicated in cases where the circumstances forbid the use of antimony. If the disposition to spasm is considerable, I think it well to add a solution of morphine or of some other sedative to the antimony. Other general means adapted to the treatment of acute catarrhal affections, as purgatives, mustard foot-bath, demulcent drinks, &c., will naturally occur to your minds, and are valuable adjuvants in the treatment of these cases. As soon as expectoration becomes free you will notice that the paroxysms subside, and then the use of the simple expectorants, as squills, tolu, &c., with guarding against exposure, and careful attention to diet and regimen, are all that are required. Blisters and other modes of counter-irritation, do not seem productive of much benefit.

But there are other paroxysms of emphysema in which simple irritation and spasm, if not the sole exciting causes, yet so far predominate as to require our chief attention. An asthmatic inhales a certain irritating air or vapor—he is immediately seized with oppression of his respiration, without marked catarrhal symptoms—and on removing the cause all this subsides at once, lasting only probably for a few hours or even less. Now in this case we have no inflammatory action to contend with, but mere irritation and spasm. In these cases opium is a remedy of great power. Given in its various forms according to circumstances, it will cut short the paroxysm, or afford the most marked relief. But let me caution you against the too free use of this remedy; the paroxysms are continually recurring, and the repeated use of the remedy may establish a habit of using it which may prove injurious.

Various other sedatives are used with advantage in these paroxysms, particularly the stramonium. Some persons are in the habit of smoking the dried leaves with benefit. The lobelia and the common tobacco are also sometimes used. These remedies, particularly the lobelia, I cannot recommend; they are very uncertain in their operation, producing very unexpectedly the most injurious effects, as great prostration, dizziness, nausea, vomiting. Some find relief from drinking very strong coffee, and I have known the inhalation of the fumes of nitrate of potass, prepared by dipping portions of paper in a saturated solution of it, drying them, and then burning them on a common shovel in a close room, productive of great relief.

Finally, it must be remembered that all cases do not possess the distinctive characters of the catarrhal, or of the spasmodic asthma, as I have described them; there are many mixed cases. Thus it commonly happens that the common or catarrhal paroxysm becomes, by frequent repetition, more and more complicated with spasm, and thus inflammation and irritation exist together in variable proportions, and in nervous constitutions the latter may occur very early, or even at the onset may constitute the predominating element. These cases, of course, require a mixed treatment—a combination of antiphlogistic and antispasmodic means, according to the judgment of the practitioner.

If, in the course of this disease, enlargement of the heart comes on, the treatment appropriate to that affection must be combined. It fortunately happens that the same principles of regimen and diet which I have laid down for guarding against the paroxysms of emphysema and for improving the general health, are appropriate to these complicated cases, only they require even more than usual care, and are particularly important in influencing the prognosis. This enlargement of the heart indicates a progress towards the natural termination of the case. If, then, congestion of different organs threaten—if dropsy occur, we must meet them with promptness, and thus put off the evil hour, if we cannot prevent its final coming.

There are two diseases of the lungs of minor importance, however, with some account of which I shall conclude this lecture. *Pulmonary apoplexy*, a pathological state resembling in all its important features cerebral appoplexy, is occasionally met with, although according to my experience, it is a very rare form of disease. We sometimes find in the lungs masses of a blackish-brown color, and varying in size from a common walnut to three or four inches in diameter. These masses are firm to the feel, solid and uncrepitating, separated distinctly and abruptly from the surrounding pulmonary tissue, which may appear either healthy or more or less conjested. When cut into they have a granulated aspect, but if the cut surface be scraped, you notice little pits or depressions in the place of the granulations. In truth, the granulations are nothing more than minute clots of blood, distending the air-cells, which are easily removed by a little scraping. These apoplectic spots gradually change in appearance with the progress of time—they first become more livid, then of a light brown or faun color, and they are finally absorbed—or they may become encysted, or create sufficient irritation to induce suppuration, thus leading to the formation of an abscess with a clot in the centre. This disease is evidently, in common cases, a simple exhalation of blood into the air cells, without rupture of any vessel. But sometimes the disease is more violent; there is probably a rupture of a blood-vessel, and certainly a laceration of the pulmonary tissue, for we find an irregular cavity filled with blood, more or less coagulated, and with shreds of the lacerated lung.

The cause of this affection is constant, or nearly so, being dependent on disease of the heart. You will recollect that when speaking of cerebral apoplexy in this connection, I remarked to you that one half the cases at least were dependent on hypertrophy of the left ventricle of the heart, with freedom of the aortic orifice. Now the same thing happens, *mutatis mutandis*, in pulmonary apoplexy, only I think the connection is far more constant—indeed I know no exception to it. There is in these cases hypertrophy of the right ventricle, with freedom of the orifice of the pulmonary artery, by which the blood is sent with increased force into the lungs. In the worst case that I have ever seen of this disease, there existed besides this a very marked contraction of the left auriculo-ventricular orifice from ossification of the mitral valve, which of course would add to the congestion by preventing the return of the blood from the lungs.

The diagnosis of this disease is not always easy. There is cough and marked oppression of the respiration, but these are not characteristic. According to Laennec, you find in those parts where the apoplectic effusion exists, circumscribed dulness on percussion, absence of respiration, and in the environs a crepitant rattle in connection with the surrounding inflammation, if it exist; but my impression is that these spots are commonly too small to present us with any clear physical signs—like the lobular pneumonia they are very difficult to detect. If, however, hæmorrhage occur, as it often does, and especially if it be abundant, the case becomes much more clear. This symptom may be excessive, and induce all the consequences of excessive loss of blood—as paleness, coldness of the surface, restlessness, and all the symptoms of exhaustion. If, then, a patient who has long suffered from the symptoms of disease of the heart, be attacked with hæmorrhage from the lungs, we are led not only to infer the general cause of the hæmorrhage, but the exact nature of the cardial affection, and shall expect to find as the primary and fundamental lesion, hypertrophy of the right ventricle with a free or even dilated orifice of the pulmonary artery, and to this may sometimes be added a contraction of the mitral orifice. This symptom, hæmorrhage, is the more important to study, because in a vast majority of instances, forty-nine times in fifty at least, it is connected with the existence of tubercles in the lungs. We now see that it may exist in connection with disease of the heart, but this is very rare; it may also exist in cases of gangrene of the lungs, but this is also a very rare affection; it may, perhaps, exist by metastasis, that is, as a vicarious discharge from suppressed menstruation or piles, but this is still more rare.

The treatment of pulmonary apoplexy is that of other forms of hæmorrhage. Blood-letting, general or local, according to circumstances, perfect rest, cool drinks, counter-irritation, and the use of sedatives and astringents, particularly of the acetate of lead with opium, and of the sulphate of copper. In some cases the hæmorrhage is so alarming and the prostration so great that we are obliged to resort at once to stimulants and to other means of supporting the vital powers. Indeed, it must be remembered in all of these cases, that depletion is only an occasional remedy, required when the strength is considerable, the pulse full, and the heart active.

Pulmonary œdema is another form of disease which I shall mention, and the more so because I think its true nature is not correctly described in books; indeed, I cannot refer you to any author who has done this. Writers confound under this name two distinct pathological conditions, viz. effusion of serum into the air-cells and into the common cellular tissue of the lungs. Now, it is the latter which, in my opinion, constitutes the true pulmonary œdema a consequence of venous obstruction, especially as connected with disease of the heart. The symptoms of this affection are very obscure. I have thought, in certain cases of disease of the heart where the sound on percussion was a little dull over the inferior portions of the chest, and the respiration rather feeble, that it might be owing to a compression of the air-cells by a surrounding œdema, but it is evident that a slight effusion into the cavity of the pleura might lead to the same result. Laennec, however, will give you a very different account of pulmonary œdema; he evidently regards it as an effusion into the air-cells themselves.

for he says, the stethoscope affords us two means of diagnosis in this disease,—the respiration is feeble, and there is a crepitous rattle more humid and with larger bubbles than that of the first stage of pneumonia. Now the only case in which I have noticed this effusion of serum into the air-cells, is during the resolution of pneumonia. It not unfrequently happens in that disease, after all the inflammatory symptoms have subsided, and the patient become entirely convalescent, that this moist crepitation, with, perhaps, slight dulness and feeble respiration, may continue for weeks at the inferior portion of the affected lung, just as we notice in erysipelas of the extremities that effusion in the cellular tissue occurs—the result of local debility apparently, for it gradually subsides. Now this is very different from common œdema.

It may be well also to recal to your minds that this serous effusion into the air-cells, sometimes, in old persons, presents itself in a much more acute form, in the pneumonia œdematodes, or peripneumonia notha, which I described to you while speaking of bronchitis, but which perhaps might have been more properly mentioned among the forms of pneumonia itself. In this affection there is a remarkable effusion into the air-cells and lesser bronchi, the result evidently of inflammation, an exaggeration indeed of the first state of pneumonia. Now let me tell you how you may know the precise seat of these effusions in the dead body, for the lung in both cases may have the same pale aspect and the same pitting on pressure—the moment you cut open a lung with copious serous effusion into the air cells, out gushes an abundance of frothy serum; while if the effusion is in the common cellular tissue, the serum is unmixed with air—like that coming from any other portion of the common cellular tissue, unless indeed a few air-bubbles get into it from the surrounding lung while we are pressing it.

True pulmonary œdema, then, being a symptom of venous obstruction, especially as connected with disease of the heart, requires, if recognized, the treatment appropriate to other dropsical effusions, and which I have detailed to you formerly, when speaking of diseases of the heart.

To-morrow, gentlemen, I shall commence the important subject of Phthisis.

LECTURE ON COLICA PICTONUM.

DELIVERED AT THE KING'S COLLEGE, LONDON.

BY DR. WATSON.

There is one particular form of colic that requires a separate notice. The colica *Pictonum*—so called from its great frequency, heretofore, among the Pictones, or inhabitants of Poicton—is produced by the slow introduction of the poison of lead into the system.

Now the colic which has this origin is not to be distinguished, in its ordinary symptoms, from any other kind of colic. But the abdominal pain is usually, in such cases, a part only of more general disease. It has received, in different places, a variety of names. Colica pictonum; the painter's colic; the Devonshire colic; the bellain of Derbyshire; the dry belly-ache of the West Indies. In all cases it acknowledges the same cause—the gradual entrance of lead into the body.

In this country we see the disease more often in painters than in any other persons. They use, as you know, white lead in the preparation of their colors; and they are perfectly familiar with this terrible colic. We see it also in all workmen whose occupations bring them habitually into contact with preparations of lead. No doubt there are very great differences in the susceptibility of this effect of the poison of lead. Persons have been known to suffer colica pictonum, in consequence of their sleeping for a night or two in a recently painted room. On the other hand, I have myself seen a patient who became affected with the disease, for the first time, after working with white lead for nineteen years. Generally the first attacks of colic are well recovered from. The obstinate constipation of the bowels is at length overcome: the patient obtains ease; and forthwith recurs to his previous habits: and after a period, which varies in different individuals, he is again laid up with the colic. Even the primary attacks are usually attended with pains in the head, and in the limbs; sometimes with cramps; sometimes even with epilepsy and coma. At length, in one of these attacks of colic, or after one of them, when the violence of the pain and the costiveness have yielded to treatment, the patient finds that he has lost the full power of using one or both of his hands. The wrists, as the patients express it, *drop*. You see at once what is the matter, by the characteristic state of the arms and hands. The extensor muscles of the hands and fingers are palsied: so that when the arms are stretched out, the hands hang dangling down by their own weight; and the patient is unable, by any effort of his will, to raise them. The palsy is local: it does not proceed from any diseased condition of the nervous centres. The affected muscles waste; and the atrophy is very remarkably seen in the bundle of muscles composing the ball of the thumb. Even from this condition the patients often are capable of complete recovery. But if they persist in following their former calling, or if, without knowing it, they continue to be habitually exposed to the exciting cause of the disease, they become miserable cripples, fall into a state of general cachexia, and sink at length under some visceral disease. The poison accumulates in the body, and saps the powers of life. Francis Citois, a native of Poicton, who published an excellent and one of the earliest accounts of the disease, in the year 1617, has drawn the following graphic picture of its effects. Its cause was not at that time suspected. Speaking of the wretched sufferers, he says, 'Per vicos veluti larvæ, ant arte progredientes statuæ, pallidi, squallidi, macilenti conspiciuntur; manibus incurvis, et suo pondere pendulis, nec nisi arte ad os et cæteras supernas partes sublatis, et pedibus non suis sed crurum musculi, ad ridiculum ni miserandum incassum compositis, voce clangosâ et streperâ.'

The course of the disease is usually such as I have just described it. The colic happens first, perhaps several times; and then arrives the palsy. But in a few instances I have known this order reversed. The wrists have dropped, when there had been no preceding colic.

The great cause of this fearful malady was first made out by our distinguished countryman, Sir George Baker. He set on foot an inquiry into the origin of what was called the *Devonshire colic;* so common was it in that county. He found, first, that it occurred chiefly in persons who drank the cider manufactured there: and, by degrees, he traced the source of the malady to the admixture of lead with the cider; either designedly, for the purpose of sweetening it; or by the inadvertent employment of lead in the construction of the cider mills and vats. It was under circumstances of the same kind that the colic of Poictou originated. Preparations of lead were used—not fraudulently, but openly and honestly—to prevent the wines of the country from turning sour; the injurious influence of lead upon the human body not having then been ascertained. So also, equally convincing proofs of the adulteration of rum by means of lead, giving rise to frequent attacks of dry belly-ache in the West Indies, are given by Dr. John Hunter, in the *Medical Transactions.* I invite your attention to his papers, and to Sir George Baker's, on this subject. They afford a capital specimen of medical research and reasoning. Various causes, as you may suppose, had been assigned for this disorder. These are one by one investigated, and set aside; until, by this method of exclusion, the real source of all the mischief is detected. Sir George Baker's papers contain a great deal of curious and useful information in respect to the various modes in which this poison of lead may find its way, without being suspected, into the animal economy. The subject is one of vast importance in its relation to medical police; but my limits will not allow me to follow it beyond the point where it ceases to be directly connected with the practice of physic.

Colica pictonum is seldom fatal as colic; or during the persistance of the abdominal symptoms: yet enough instances of death occurring while the colic was present, but from other accidental causes, have now been collected, to enable us to say, that no appearances have been met with in the intestinal canal, calculated to explain the pain or the constipation. Andral relates five cases, in which the body was carefully examined after death preceded by the painter's colic. He found neither inflammation, nor any remaining trace of spasm. The intestines were neither dilated nor contracted, but of their natural texture and appearance. Merat, who has written a good treatise on this form of colic, gives the dissections in four fatal cases; fatal, as I mentioned that they sometimes are, by the supervention of coma. There was no discoverable mark of disease; the alimentary canal was empty, and the large bowels contracted; as they were also found to be in rabbits which had died of lead colic. For animals are susceptible of the disease, and it may be produced in them by the slow impregnation of their bodies with the specific poison. Dogs, cats, and rats, that inhabit houses and manufactories wherein lead is much used or prepared, are known to be attacked both with colic and with palsy. With respect to the contraction of the large intestine in these cases, we must not be too ready to attribute it to spasm; for the bowel, when empty, is apt to be contracted.

When the palsy has been of any continuance, the affected muscles not only shrink and waste, but undergo a structural change, which is obvious to the sight. They become pale, almost white, dry. John Hunter examined the muscles of the hand and arm of a house-painter, who died, while thus paralytic, in St. George's Hospital. He found them of a cream color and opaque; instead of being of a purplish red, and semi-transparent. And, since his time, lead has been detected in the palsied muscles, and in the brain, by chemical analysis. It is doubtless conveyed, by the blood, to all parts of the body: why it fastens solely or chiefly on particular muscles, or particular nerves, nobody knows. The pain it occasions, whether in the abdomen or in the limbs, is generally thought to be neuralgic. It is one of the poisons that do not appear to find a ready exit from the body. Very recently, a most curious symptom, pathognomonic, I believe, of the presence of lead in the system, has been pointed out by Dr. Burton: and now that it has been pointed out, one can hardly understand how it escaped discovery so long. It is a blue or purplish line running along the edges of the gums, just where they meet the teeth. Dr. Burton first noticed this six years ago, but wisely refrained from making his observations public until he had had time and opportunity enough to satisfy his mind that he was not mistaken. A paper of his on the subject was read at the Medical and Chirurgical Society last January, (1840.) I cannot resist the temptation to read to you the notes of a case which has subsequently occurred to me in the hospital. Mary Anne Davis, a middle-aged woman, presented herself with dropped wrists. It was an exquisite example of palsy of the extensor muscles of the hands and fingers. She could raise her arms, but her hands hung down like the talons of a bird, or like the fore paws of an erect kangaroo. This began nine weeks before. She complained of pain, beginning under the nails, stretching up the back of her hands, and reaching sometimes to the elbows. The bottoms of her feet had also been tender; and at night were burning hot.

Seeing the dropped wrists, we thought immediately of the poison of lead. But the patient was a female. We do not often see these effects of that poison in women; for obvious reasons. At first we could get no clue to the mode in which lead could have found its way into her system. Her husband was a broker. She had not been living in a newly-painted house; and had (she said) no concern with lead in any way. Lead often creeps in, however, through undetected channels, and I could not help suspecting it here. Mr. Pyper, my clinical assistant, soon elicited another part of her history, which added to our suspicions; namely, that before the palsy occurred, she had had pains in the abdomen, and costive bowels, for five days together. Nay, she had a recurrence of colic after her admission. This was a strongly corroborating fact; but what clenched the proof was the discovery of a decided blue rim along the edges of nearly all her gums. This conclusive evidence led to further cross examination; and at last it came out that some of her sons (she had seven) occupied their leisure time in the preceding summer with making bird cages, and painting them green, in the one room in which she habitually lived. The case altogether was a very neat one.

Mr. Tomes pointed out to me some interesting circumstances which led him, at one time, to think it probable that the color is produced by some chemical action between the tartar that forms on the teeth, where they meet the gums, and the lead which pervades the system. This woman's teeth, like those of many in her rank of life, were loaded with tartar. In one place was visible a stump, level with the gum, and surrounded by a ring of tartar; and *there* was also a corresponding border of blue. In other places there were gaps, where teeth once were; here there was, of course, no tartar; and here there was no blue line on the edge of the gum. I do not know exactly in what manner the chemical union arises, but the color depends, I believe, upon a *sulphuret* of lead, formed somehow by the action of sulphuretted hydrogen upon the metal.

This discovery of Dr. Burton's is not a mere piece of curiosity, but is likely to be of use in various ways. In the first place, it may settle the nature and cause of many doubtful cases; as it did indeed of the one just narrated. The poison of lead causes pains which resemble, and no doubt are sometimes mistaken for, the pains of rheumatism; it has other obscure consequences too: and an inspection of the gums may often greatly elucidate such cases. Dr. Burton finds that small quantities of lead given as a medicine will produce the phenomenon. In two instances it occurred within two days. One of these patients had taken fifteen grains of the acetate of lead in that time; the other twenty-four grains. A correspondent of his produced the blue rim in twenty-four hours; viz., by four doses, of five grains each, exhibited every six hours. He finds too that the lime remains distinct after death, even more so than during life. It may afford valuable information therefore to the medical jurist in cases of suspected poisoning with the salts of lead. It is, I say, an *early* consequence of the absorption of lead. It will teach us, as the mercurial affection of the gums teaches us, that the medicine is pervading the system; and admonish us to look out for, and guard against, colic. It may apprise workers in lead that their caution has been insufficient; that the poison has entered; and that they are in peril of belly-aches and palsy. It is a capital diagnostic sign also between colic so arising, and colic from other causes; and between colica pictonum, and the pain of inflammation of the bowels.

In the *treatment* of colic—and especially of the lead colic—the great indication is to get the bowels to act. If the pain of the belly be increased on pressure,—if the pulse be at all accelerated,—if the face be flushed, and there be the slightest approach to fever, it will be right to take blood from the arm. It is a measure of safety as regards the possible existence of inflammation: and if there be no inflammation present or impending, it will tend to remove the spasmodic state of the muscles which goes along with, and perhaps chiefly constitutes the disease. External warmth should also be applied; diligent friction, with some stimulating liniment; or, what is much better, a mustard poultice, or a turpentine stupe. My colleague, Dr. Wilson, has been very successful in relieving these patients, by putting them into a hot bath, and having a large quantity of the water in which they are immersed, thrown gradually into their bowels by means of a proper syringe. The bath presently becomes polluted, to the great satisfaction and refreshment of the patient. It will generally be expedient to give a full dose of calomel and opium; ten grains of the one with two of the other. Sometimes the effect of the opiate is to suffer the bowels to empty themselves; showing that the previous difficulty was probably spasmodic. Usually the calomel and opium will soothe the vomiting, the restlessness, and the pain; and then a full dose of neutral salts, or of castor oil; or (if these do not succeed) of the last named remedy, castor oil, quickened by one or two drops of the oil of croton, will give rise to free evacuations from the bowels; and the patient soon returns to his ordinary state of health. It is sometimes necessary to repeat this practice, this alternation of purgatives and anodynes: but when once the bowels have been freely moved, the disease, in general, becomes very tractable.

At La Charité, in Paris, there is what is called a specific mode of treatment followed. It is complicated and rough, but not a whit more successful than the simpler plan which is universally adopted in this country. You may see it described, if you are curious on the subject, in most of the French books. I think it is given in detail in Ratier's Formulary of Hospital Practice.

Some have recommended salivation for the cure of the painter's colic, on the principle, I conjecture, of driving out one metallic poison by another. But the two may combine, for aught I know, to plague the patient. The practice is quite unnecessary.

You will be consulted about the palsy which arises from lead, and especially to remedy the dropped wrists, which render the patient incapable of earning his livelihood. Now in the early stages of the palsy, and in its primary attacks, you may often succeed in effecting a cure. Electricity has been thought useful, applied in the way of sparks at first, and of slight shocks afterwards, along the muscular parts of the extensors of the fingers. It accelerates the recovery to give the hand and fingers the mechanical support of a splint, made for that express purpose, and so contrived that the hand and fingers are kept extended through the greater part of the day. Patients laboring under this kind of palsy resort to the Bath waters for a cure: and I learn from a gentleman who once held the office of house-surgeon to the hospital there, that the physicians have much more faith in the use of the baths, with shampooing, and in splints and blisters to the palsied muscles, than in electricity. The warm douche is a promising expedient: the electro-magnetic apparatus, perhaps, still more so.

According to Andral and others, who have had more experience of that drug than I have, there is no form of palsy so likely to be benefited by strychnine as this which proceeds from the poison of lead. I should recommend you to try the safer methods of binding the hand to a splint, and stimulating the muscles by friction, shampooing, or electricity, before you resort to that active poison.

It is observable of this disease, as of many, and, indeed, of most others, except certain contagious febrile diseases, that when once it has occurred, it is much more liable to occur again, upon a repetition of the exciting cause, than before. It is of very great moment, therefore, that they who are necessarily exposed to the poison of lead—as painters, plumbers, printers, (who handle leaden types,) color-grinders, potters, and glass-blowers, (who use the oxide of lead in their respective manufactories,) shot-makers, workers in lead mines, and so on—it is of great importance that these persons should be made aware of the means which are best adapted for their protection against the injurious agency of the poison: and we ought to be able to give them advice in that matter. The rules for their guidance are short and simple; and if carefully observed, I believe they will generally prove successful. They resolve themselves into cautions against the admission of the metal or its compounds into the body through any channel.

1. To prevent its introduction through the skin minute attention to cleanliness is necessary. The face and hands should be washed, the mouth rinsed, and the hair combed, several times in the day; and bathing and ablution of the whole body should be frequently performed: also, the working clothes should not be made of woollen, but of strong compact linen; and they should be washed once or twice a week at least; and they should be worn as little as possible out of the workshop: and some light impervious cap might protect the head while the person is at work.

2. Care should be taken that none of the poison be admitted into the system with the food. The workmen, therefore, should not take their meals in the work-room, and should be scrupulous in cleansing their hands and lips before eating.

3. The entrance of the poison into the air-passages during respiration should be guarded against as much as possible. Masks have been recommended for this purpose: none, probably, would be more convenient or more effectual, than Mr. Jeffreys' orinasal respirator.

There is a notion prevalent in some places, which apparently has some foundation, that the free use of fat, and of oily substances, as food is a preservative against the colic. A physician near Breda informed Sir George Baker that the village in which he lived contained a great number of potters, among whom he did not witness a single case of lead colic in the course of fifteen years; and he attributed their immunity to their having lived very much on butter and bacon, and other fat kinds of food. De Haen also was told by a physician, the proprietor of a lead mine of Styria, that the laborers there were once very subject to colic and palsy; but that after they were exhorted by a quack doctor to eat a good deal of fat, especially at breakfast, they were exempt from these disorders for three years. This is a kind of prophylaxis that is very easily adopted.

More recently Liebig has asserted that 'the disease called painter's colic is unknown in all manufactories of white lead in which the workmen are accustomed to take as a preservative sulphuric acid lemonade, a solution of sugar rendered acid by sulphuric acid.

If this be so, the lemonade must protect the system by converting any other salt of lead, which might find entrance, into an insoluble sulphate: solubility being necessary to give efficacy to any poisonous substance.

REVIEW DEPARTMENT.

An Address delivered before the Medical Society of the County of New York, July 25, 1836. By James R. Manley, M. D., President.

This is one of the very few 'addresses' to medical societies, that deserve to be put to any better use than that of waste paper. The following passage is forcibly corroborative of our views respecting the state of medical education in this country; and in the hope that its eloquent vindication of the dignity of the profession and the interests of humanity, may not be without effect, we transfer it to our columns:—

> That the character of the physician has suffered, is true; but it has been through the agency of those who have assumed it without sufficient warrant; the high-minded, moral and intelligent practitioner, who pursues his profession influenced by a just sense of its responsibility, is at once an ornament and blessing to society; and it is to these that the public should look, as the exemplars of the science which is calculated to do infinite good or irretrievable mischief, according to the measure of intelligence and morals which are brought to bear upon its practice. This society was instituted to educate and to cherish such, and it has existed long enough to have made its influence to be felt, if the means had not been

mistaken to attain this desirable end. Its charter was thought to be as liberal on the one hand, and as restrictive on the other, as could well consist with the genius of our political institutions; and it was presumed, that what it lacked in power to restrain unlicensed or unqualified practitioners, could readily be supplied through the influence of the personal character of its members: if the framers of the law were deceived in the result, it was not so much their fault as their misfortune. They knew that the improvement of the profession would be the work of time; but they believed it would be constantly progressive: they never could have anticipated the occurrence of events which have happened to retard the march of its improvement; they never foresaw that schools of medicine would be instituted with the double view of making characters for teachers, and of educating men to be called physicians, at less expense than would be required for the support of an apprenticed tradesman, and in less time than is ordinarily necessary to make a master workman in any mechanical employment; that the candidate for license rejected by a competent tribunal as unqualified, would himself become a teacher, and claim merit for contemning the requisites of an education rendered indispensible by the laws of the state and of the institutions chartered under its authority: that all the preliminary studies necessary to qualify the pupil to receive instruction would be dispensed with, in order to bring, if not the honors, at least the profits of the profession within the compass of the most limited means; it did not enter into their calculation to provide against contingencies so improbable.

They could not believe that within the short period of twenty years, the requirements of a medical education would in some districts of our country be reduced so low as to offer strong temptations to abandon other pursuits with a view to profit by the exchange: they would have been shocked at the bare suggestion that within a little more than thirty years from the grant of this charter, *Medical College making* would become with some ingenious men, A TRADE:—that colleges would be chartered giving powers to confer medical honors and political rights which to this hour exist but on paper; that seals would be granted, and to save labor in the wholesale manufacture of diplomas, signatures would be lithographed and sold about the country at various prices, like the merchandise of an itinerant pedlar; and least of all could they have anticipated that persons belonging to this society would become the agents in this disgraceful traffic,[*] and yet how humiliating the truth! all these things have happened. Is it matter of astonishment, then, that the public have become disgusted, and that their confidence in the resources of an art which can admit of such abuses should have been impaired? The results of all these devices to defeat the plain intentions of the legislature we are now suffering; and one of the most disastrous, because, the most comprehensive evil is, that with many practitioners the medical profession has become a *trade*, in a great degree resembling other trades, governed by the same general laws; practised for the same general purpose; to wit, the profits which it may afford; while the high and holy obligations which it requires, are in danger of being forgotten in the strife to amass a fortune, manufacture a character, or attain notoriety.[†] The reduction of the requisitions for license has had the effect, in mercantile phrase, of increasing the supply of physicians beyond the demand, and multiplying their number at the expense of their qualifications; it has also invited from the walks of middle life, many who, but for the temptation thus offered, would have qualified themselves to excel in various vocations, which do not necessarily require an expensive education. But this is not all; it has been productive of injury, by increasing the number of those who from their entrance on the duties of the profession were obliged by necessity to live on its proceeds; and that these are small in the outset of his career, every physician too well knows. There is no employment which promises less reward, for at the least the ten first years of occupation, than that of the physician; his road, if he is an honest man, is both rugged and tedious; 'the steep where fame's proud temple stands afar,' is more difficult of access to him, and much further removed than from others, however legitimate his claims, or however great his desert: he must have other resources than those to be derived from his practice in early life if he would avoid the temptations of poverty, since there is little room for the exercise of that professional liberality, which should always distinguish the physician where the *res angusta domi* goads to the exercise of duty.

But it is unnecessary to dwell on the unpleasant detail of the causes which have, and do operate, to impair public confidence, to degrade the character and circumscribe the usefulness of physicians; the inquiry should be, how can their condition be amended? what measures can we adopt which will give promise of improvement in the system of education; which shall elevate it in the public opinion; which shall rebuke pretence and imposture; and give assurance to the world that its weighty responsibilities are properly estimated by the members of this society? We have ample evidence of the insufficiency of penal statutes to protect either the public or the profession; and the legislature of this State at their last session displayed their wisdom by leaving their late amendment of the law of medical license, without any other than a negative sanction. Public opinion will effect what law is unable to execute, provided educated physicians do their duty to themselves. It is to the indifference manifested by the profession to the inroads of ignorance and imposture, that we have a right to attribute a large measure of their success. It is not to be expected that the public will interpose to prevent their extension, when those to whom is committed in an especial manner the keeping of the honor and interest of the medical character, appear to acquiesce in the degradation of both. It is treason to the interests of humanity to permit, when we have the power to prevent this wholesale speculation on human suffering; and if there is a reality in the succors which medicine can afford, it is our duty not only to afford them, but to guard against the frauds which would prevent their timely application.

When will the enlightened members of the profession awake to a full sense of their responsibilities? Let it not be said that we must be forced into reform by public opinion.

---

[*] The history of the medical department of the college at New Albany, in the state of Indiana, as spread upon the minutes of this society in 1835, abundantly warrants the severity of this remark. All this is emphatically true of this institution, to the letter.

[†] Medicine practised merely as a trade, is of all trades the most fraudulent, because the advantages are by necessity on one side, the patient being always the dupe: his hopes and his fears, his sorrows and his sufferings both for himself and those whose interests are involved in the issue of his illness are all instruments in the hands of his physician to magnify the dangers of disease in order to enhance the merit of his services; by his knowledge of the immediate effects of medicine, he can with apparently a wizard foresight predict results, which while they astonish the ignorant, serve to command the confidence of the patient; and last of all, when dangers thicken and prospects of recovery become more and more remote, he has only to manufacture a case for his counsel which never had existence in any of its previous stages: and when the gloom of the grave settles around the patient's death-bed, justify himself to the sorrowing family by the affectation of a solicitude which he never felt.

On the Origin and Development of the Diseased Condition of the Intestinal Glands, which occurs during the course of certain forms of continued Fever. By John Goodsir, Esq., Member of the Medico-Chirurgical Society of Edinburgh, &c. Read before the Medico-Chirurgical Society, February, 1842.

We commend the following able article to the attentive consideration of our readers:—

Without entering upon the question, as to whether the subject of the present paper constitutes a distinct species of disease, or be merely a form of the ordinary continued fever,—a question which I am quite satisfied will never be answered, so long as each pathologist confines the inquiry to the fever of his own district, without connecting with it the consideration of those forms of fever which occur in every separate district of a country or continent, —I shall proceed at once to describe a lesion which I observed some time ago in a disease which I was led to consider as typhus or continued fever.

On opening the abdomen of individuals who had died of this fever, we could always recognise the diseased condition of the internal surface of the gut, by the elongated bluish purple spots on its peritoneal surface, corresponding to the glands of Peyer on the internal surface; and this we could do, even in those cases in which, from other circumstances, the vascularity of the parts had disappeared after death.

On laying the gut open, the patches of Peyer's glands exhibited, according to the standing of the case, the various appearances which I shall now describe.

But before proceeding to detail the phases through which the patches pass, from the first appearance of the disease till the establishment of the typhus ulcer, or of perforation, I may remark, in regard to the condition of the mucous membrane in the neighborhood of the patches, that it did not in every case exhibit unequivocal traces of inflammatory action. It might be highly congested, or it might be perfectly bloodless in cases of well-developed disease of these patches. I cannot say that I have often observed the mucous membrane pulpy or softened. The villi and follicles of Leiberkuhn have always appeared to me to be healthy. The vascularity, when it did occur, was met with principally in the neighborhood of the glandular patches, and resembled in all respects that described and figured by Dr. Bright, in his report on the form of fever lesion now before us.

The commencement of the disease is first announced by the smaller patches becoming slightly elevated, so as to be hemispherical or conical, and by the more extended groups assuming a table-like appearance, with perpendicular edges, as if a flat plate had been placed on the mucous surface. The color varies according to the case, from bright carmine red, to dark purple or black, continuous, or in patches. In the more vascular specimens, the color is a yellowish gray, contrasting with the dead white or grayish white of the intestinal surface. More closely examined, the surfaces of the patches exhibit, as usual, the follicles of Leiberkuhn and villi, differing in no respect from those on a healthy surface, and arranged around the vesicles of the patch in the usual manner. An examination of this kind must be made under water, and when conducted in this manner, the vesicles of the patch may be seen, by floating aside the membranous border and circle of villi which surround each of them. The vesicles themselves may thus be seen to be much distended with a yellowish matter—a distention which is now perceived to be the immediate cause of the elevation of the patch.

In the second stage of the disease, the patches still continue to rise above the surrounding surface, and to exhibit the changes formerly described, in a more characteristic manner. As the elevation increases, a change begins to take place on the elevated surface. This change may be partial, that is to say, it may take place sooner on some parts of the patch than on others, but generally it extends over the whole surface, and is bounded by a line situated from a tenth to a sixteenth of an inch from the edge of the patch. The change itself consists in the surface beginning to alter in color, becoming dirty yellow or gray, and assuming a peculiar undulating or contorted surface, like a bit of leather seared with a hot iron. The villi have now in a great measure disappeared, but the orifices, or rather the circular folds, or pits, in which are situated the vesicles, are still visible. At last, the confines of the changed portion of the patch are rendered evident by a groove apparently produced by ulceration, which, appearing here and there on these confines, at last extends all round, aud indicates some change about to take place in the whole arrangement of the parts.

In the third stage, the groove just described makes its way into the tissues; and as it does so, the healthy but elevated mucous membrane on its external edge, gradually everts itself, as if by the upward pressure of the matter beneath it. While this is going on, the edges and surface of the altered portion become more rugged, and their former character somewhat obscured. The altered portion which now assumes very much the appearance of a slough tinged with intestinal matters, becomes more and more detached from the surface to which it adheres. When the mass is gently raised under water, it may be observed that its attached surface sends processes down into the cellular membrane beneath; and if these processes be carefully drawn out, they will be found to correspond each with one of the original vesicles of the patch. When detached in this manner, they leave on the surface to which they adhered, dimples, or rather pits, which may be recognized as being the cellulo-vascular sheaths of the patch vesicles.

Occasionally the free surface of the altered portion comes away first, in the form of flocculent laminæ, and the deep processes continue to be attached for some time in the cellulo-vascular capsules, like little nodules or pellets of a rounded or pyriform shape.

The altered portion, even immediately before detachment, may still present on its surface traces of its original structure. The orifices of the follicles in which the vesicles are situated are visible here and there on the surface, and the membrane retains sufficient consistence to bind the mass together.

Fourth stage. When the sloughy mass has separated, the surface of what may now be called an ulcer appears flocculent; but, when examined under water with a couple of needles, a number of foveæ, the remains of the cellulo-vascular capsules, may be observed on it. In some of these, the little pellets of deposit may still remain attached, appearing like mustard seeds scattered over the surface. The edges of these ulcers are thick and everted, and exhibit the natural structure of the mucous membrane. In some ulcers the eversion of the edges proceeds so far as to throw the mucous surface of the edge completely over, so as to apply it to the surrounding mucous membrane.

Fifth stage. The ulcer may now heal, or proceed to perforation of the gut. In the former case, granulations, I presume, appear, and the reaction of these cellular elements carries on the contraction and cicatrization so well displayed in some of the preparations on the table. In the present form of ulcer, as in others affecting the mucous coat of the bowels, it is some time before villi again make their appearance on the cicatrized surface; but these changes I have not watched or observed. When the ulceration proceeds towards perforation, it is generally one spot of the patch which is more particularly affected, the rest of the ulcer retaining its former granulating or flocculent appearance. At this stage of the process lymph begins to be deposited on the external surface of the gut; and if the patient survives the perforation eight or ten hours, the lymph rounds off the edges of the hole, and gives it that punched-out appearance so frequently observed. The omentum may adhere opposite the incipient perforation, and after contraction has concluded, it appears as if it had been forced from without into the hole, an appearance from the contracting agency of the granulations.

Having now described the changes which the patches undergo in this form of disease, I have to point out the peculiar matter upon the presence of which these changes appear to depend. The gray matter which fills the vesicles or the spaces which they occupy, I find to consist of that universal element of every primitive tissue, healthy or diseased, nucleated cells. These cells are from 2000 to 4000 of an inch in diameter. They do not in general exhibit a nucleus in the sense in which that term is generally applied; that is, the individual cells do not present in their interior smaller cells holding certain relation to them. These cavities appear to contain a number of granules, four, five, or six, as far as could be reckoned. Whether these in the aggregate are to be considered as a nucleus proceeding towards the formation of a number of young cells, or whether the appearance is to be considered as analogous to that irregular form of nucleus and cell-contents characteristic of certain forms of tubercle, I do not know. This matter, of whatever nature it may be, appears first in the vesicles of the patches, and then spreads out on all sides, after the manner of other purely cellular structures, till the whole patch, before it is thrown off, appears to be principally formed of it; the surface of the mass, however, as has been stated, and certain parts of its interior, consisting of the somewhat altered mucous and submucous tissue.

The morbid changes which the glandulæ aggregatæ of the ileum undergo during continued fever, appear, from the observations I have just detailed, to be of the following nature, viz. the development of cells within the constituent vesicles of the patches to such an extent as at last to burst them, or cause their solution—the continued increase in the number of the cells, proceeding from as many centres as there are vesicles in the patch—the conglomeration of the whole into one mass above the submucous and under the mucous membrane—the distension of the latter, and the necessary ulceration and sloughing of the mass arising from this circumstance.

The whole mass, as detached from the gut, is not therefore to be considered as a slough; that portion only which consists of the upper halves of the vesicles and of the mucous membrane, being dead, the greater part consisting of the cellular mass, being merely detached from the submucous tissue, and consists of those nucleated cells, which, at first confined within their generative vesicles, had at last vegetated so much as to break their natural bounds, and to become one mass of cells, constantly increasing in numbers, except below, where the separate centres from which they originally proceeded are indicated by the processes and little pellets which are situated in the remains of the vesicle capsules.

It will have been observed that I have not employed the term 'inflammation' in the course of the description I have just given. Whether the changes I have described originate in inflammatory action or not, of this I am certain, that the ulceration and pseudo-sloughing is an immediate effect of the distension from the submucous vegetating mass, and would occur whether the latter were produced by inflammation or not.

In regard to the history of this department of the morbid anatomy of fever, I may state, that Dr. Bright has given very beautiful representations of the sloughs and ulcers in his *Reports of Medical Cases.* Louis and Chomel have referred to the appearance of the matter which distends the glands, and compared the process to the tuberculous. Schonlein, in his *General Pathology*, has made a general allusion to the deposit, and to the changes which occur in the patches. [Schonlein, Allgemeine und specielle Pathologie and Therapie. Zweiten Thiele. 1839. p. 23.] Gruby, in a work on the *Microscopic Character of Morbid Products*, [Observationes Microscopicæ auctores Dav. Gruby, 1840, p. 44,] was the first, as far as I can learn, who figured and described the cells of which the deposit consists. Finally, Rokitansky [Rokitansky. Handbuch der Pathologischen Anatomie, Band iii. p. 265,] has generalized the subject, and considered the matter deposited as peculiar to typhus fever, and referable to the same category as cancer, tubercle, &c.

My own observations have been made without reference to any hypothesis as to the pathology of fever.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, September 24, 1842.

It is to be regretted that no reply has as yet appeared, or is likely to be offered, to the 'Exposition' by Dr. Manley. Not by any means, that we care for the personal squabbles, which helped to make up this controversy, but because there are points of great and general interest involved in the discussion thus commenced, and which we cannot, with faithfulness to our trust, avoid subjecting to some examination. Whether Dr. Manley were treated with courtesy and justice or not,—whether Dr. Smith be a man of talent and a useful teacher or not,—are not the questions of interest to us, or the generality of our readers. But the mode of government to which a public medical institution has been subjected,—its merits and demerits,—its results,—and its liability to censure or its claims for commendation,—these are the points of importance, and to these we may not unprofitably advert.

It appears that Dr. John Augustine Smith holds three offices in connection with the College of Physicians and Surgeons. He is President of the College,—a Trustee,—and one of its Professors. We are certainly of opinion that such a plurality of official stations, is injurious and improper; and we do not believe that Dr. Manley puts the matter in too strong a light, when he says—

> 'It was a great mistake to place the government of this medical school in the hands of persons, who by the necessity of the case are no judges of medical acquirement. It was a still greater one, when, as if to render even this organization nugatory, the Regents of the University appointed Dr. Smith who is a professor, also its President; thus making him the channel of communication between the boards of professors and trustees, he holding the one office by appointment, and assuming the other, claiming to preside over both. All communication between these bodies must now be held through an interested agent, who

is more intent on preserving his own situation * * * than in protecting and cherishing the interests of the institution.'

Dr. MANLEY appeals to the experience of the last few years in proof of the injurious tendency of this error in the arrangement of the College; and indeed with our knowledge of that human nature which directs the presiding power, it requires little demonstration to produce the conviction, that just as often as the private interests of the pluralist come into collision with the welfare of the institution, the latter will be jeopardized. In these degenerate days, it is rare indeed to find the self-denying virtue, which sacrifices personal advantage and private ambition on the altar of public good. Were there no other and more important reasons for dissevering the governing power from the duties of the teacher's chair, charity to the individual thus placed in such an equivocal position, and exposed to such temptations, should exercise sufficient influence to effect his dislodgement.

We entertain the most friendly feelings towards this College. It deserves our respect. Its claims on public support and esteem are acknowledged. It is the only respectable medical institution in this great city. Many of our most distinguished practitioners were educated in its halls. Its chairs have been occupied by some of our most eminent men; and amongst its Professors this day, there are those who have enriched our medical literature, and earned an honorable name. Besides all this, the school has reached an eventful period in its history. A season of a greater and more enduring prosperity apparently awaits it, if they in whose hands are its fortunes, be wise and faithful to its best interests. Let private ends be no longer sought. Let a disinterested and generous policy be adopted. Let every error in management be quietly and calmly corrected. Let a due sense of their responsibilities be entertained alike by trustees and professors, and assuredly well-earned and honorable success will attend the school, whilst they will attain the no mean reputation of having faithfully discharged their duties, and efficiently promoted the important purposes for which the institution has been established.

Some surprise has been expressed in several quarters, relative to the omission in the last Circular of the Crosby-street College, of any reference to the course of lectures on Medical Jurisprudence delivered by Professor BECK. This surprise is certainly natural, when it is recollected that Dr. BECK is the most distinguished man connected with the school, and that the portion of his labors thus strangely overlooked, constitute no mean attraction to the student. The omission must, however, have been purely accidental, but still we cannot help joining in the regret which it has occasioned.

Whilst we are speaking of the College, we would venture, with great humility, to suggest to Professor TORREY the propriety of combining a little medical chemistry with his valuable course of lectures. We are aware that the course heretofore given is well adapted to draw large classes, but we really do not think that the number of Dr. TORREY's auditors would be diminished if he were to devote a portion of his time to the special instruction of his medical pupils.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Scirrhus of the Sigmoid Flexure of the Colon.

TO THE EDITOR OF THE LANCET.

SIR:—

Should you think the following case worthy of an insertion in your journal, it is at your disposal.

Sept. 5th, 1841.—I was called to visit Ann C., æt. 35, who was apparently laboring under an attack of colic, attendant upon constipation. Upon inquiry, I found that she was habitually constipated, sometimes passing several days or even a week without an evacuation. Aside from this, or rather not considering this as a disease at all, she said her health had always been good. At this time, if I mistake not, she had been a week without a motion. She complained of colicky pains in her bowels, more particularly about the left iliac region, and there being no symptoms of enteritis, and supposing she would entirely recover under the influence of an anodyne and cathartic, I ordered her

℞ Ol: Ricini, ℥ij.
Tinct: opii, ʒss.
M.

Which if rejected by the stomach, or not producing the desired effect, was to be followed by an oleaginous enema The next day I was called to see her again; the oil had been retained, but with no benefit, and the clyster had come away with a very little hardened fæces, but the pain still remained. Her tongue being somewhat furred, stomach irritable, and pulse accelerated, I gave her a dose of calomel, to be followed by salts, senna, and manna, and a repetition of the clyster. Receiving no benefit from this treatment, and the pain in her bowels increasing, and remaining without sleep, I ordered her an opiate at bed-time.

The next day, there was some tumefaction of the abdomen, with pain, no appetite, pulse small and irritable, with a cold clammy sweat and stercoraceous vomiting. I then gave her croton oil, which was also applied externally to the abdomen with friction, and had administered to her an enema—

℞ Ol: Ricini, ℥ij.
Ol: Terebinth, ℥ss.
M.

A part of this, which was combined with a large quantity of mucilage, was retained, but seemed to increase the difficulty. The succeeding day being no better, but rather worse, as a dernier resort I made use of an enema of tobacco, making use of stimulants internally at the same time, on account of her debility. She continued to sink, her pulse becoming more irritable and frequent, with stercoraceous vomiting and cold clammy sweats, until she died, on the 14th of September, sixteen days after her last evacuation.

Autopsy six hours after death.—Tho organs in the cavity of the thorax were healthy. The stomach and small intestines, as well as the large, were somewhat inflamed. At tho sigmoid flexure of the colon (which was considerably enlarged above this point,) there was a scirrhus extending over the whole circumference of the bowel, and two and a half inches in width, ulcerated in several points. The natural diameter of the colon was so much reduced that an ordinary quill would hardly pass the constriction.

According to Meckel, 'this disease begins in the peritoneal coat and glandular muciparæ, whence it afterwards extends to the muscular and villous coats. The effect of it is to confound together all the tunics, to harden and thicken them,' (as was the case in the present instance,) 'and in the end to produce cancerous ulceration.' Such cases being beyond the reach of manual examination and surgical aid, are of course incurable, and their true nature is scarcely ever ascertained till after death.

D. R. R.

New York, September 13th, 1842.

Treatment of Chronic Pleurisy with Effusion.

BY THE LATE JAMES HOPE, M. D.,

Assistant Surgeon to St. George's Hospital, London.

[The following paper must possess a high interest for our readers, when we inform them that it was commenced by Dr. Hopo during his last illness, and concluded on his death bed. Unable to complete it as he could have wished, he was compelled to dictate it in the shape of notes, which he finished only four days before his decease. To those who knew Dr. Hope well, this zeal for science and his fellow creatures will occasion no surprise. It was consistent with the character of the man, who died as he had lived, an accomplished physician and a good man.]

At the present time, there is a prevalent douht whether the fluid of empyæma is ever absorbed. This fluid, it may be remarked in passing, may be either sero-fibrinous and albuminous, or contain pus in any degree up to its pure condition. This seems to be now a settled question, and I think it ought to be so, as the fluid, in healthy subjects, kills not by its quality, but by suffocating.

I cannot feel surprised at this want of success in the cure of empyæma, when I notice the unsettled, vacillating, inadequate treatment recommended even hy those writers who think most favorably of the possibility of a cure.

Dr. Law's treatment comes nearest to that which I have found effectual, but he is too timid in continuing the gentle use of mercury, from fear of its inducing irritative fever and hectic. This supposed irritative fever, however, is, in most cases, nothing more than excitement of anæmia, (a fact of which he does not seem to be at all aware, as even in the convalescent period, he does not even name iron as a remedy,) and the hectic is a necessary consequence when the fluid is pus, and this is diffused through the whole circulation by the process of absorption. I have steadily continued the gentle external use of mercury through the most violent hectic, coming on twice a day in paroxysms; while I have counteracted this by the free use of mineral acids; and by diet, not only of strong broth at luncheon, but of animal food at dinner—the patient's tongue being clean, and his appetite and digestion always good.

Dr. Stokes, whose writings on pleurisy I had not the pleasure of seeing till long after I commenced my own observations, I find to be far the most successful in his treatment of chronic pleurisy and empyæma. In an excellent chapter, containing a considerable portion of original matter—some, perhaps, a little fanciful—he mentions that he cured twenty cases running by the use of a pint daily of cold solution of Lugol's iodine, and from a quarter to half an ounce of the ointment rubbed into the side. He is, likewise, very favorable to the use of blisters.

I have myself been instrumental in curing five and thirty cases consecutively, during the space of four years, but principally two years and a half, while I was assistant physician to St. George's Hospital.

As I have not leisure to continue this paper at present, I subjoin the following memoranda of how I shall proceed if time permit.*

The private cases being in great detail, and in general features greatly resembling each other, it would be useless to give the whole in full. Therefore pick out a few which give at length as general types—for instance, Miss Miller, Mr. Morgan, and Sir Clifford Constable's coachman—the remainder insert in an abbreviated form, together with such of the patients of St. George's as I can recal to memory, though I have lost the notes of their cases.—Show that I used mercury in all degrees of intensity, so as to ascertain what quantity was the most effectual, but at the same time, least injurious.—Show that I always used opium, in full proportion with the mercury, and that I used the milder and external forms when the others could not be borne—thus taking *especial* care to protect the mucous membranes.—Add that I found prompt and free salivation by calomel and opium, and the use of one or two drachms on each groin and axilla night and morning for forty-eight hours, (in conjunction with the other remedies presently to be specified,) produce the most rapid and satisfactory effects of absorption, in cases where the dyspnœa and faintness seemed to me most urgent and dangerous. It was quite common, and, in fact, occurred in the majority of cases, that the fluid descended one-third, and still oftener one-half, down the chest, within the space of forty-eight to sixty hours, carrying with it the extreme dyspnœa and faintness, to the great relief of the patient.

Say that blisters were used from the first, and that the following became my settled plan of managing them. One blister six inches long, three and a half broad exclusive of margin, was placed longitudinally over, and a little to the outside of the angles of the ribs, leaving space for another of similar size between the first and the spine. Great care was taken not to remove the cuticle, (one means of which was to cover the surface of the blister with silver paper,) as this forms by far the quickest healing plaster; but after about forty-eight hours, during which the running was absorbed by dry napkins, carefully prevented from adhering, it became necessary to cover the whole with the mildest soap plaster, spread on soft calico, to prevent the cuticle from being accidentally abraded. In this way all irritation promptly subsided, that is, in the course of from two or three days, and the patient was ready for the second blister, which was placed between the first and the spine. It was similarly treated; and, at an equal interval, a third was placed in front of the original one; that is, rather forward in the axilla. When pain indicated the possibility of a pleuritic stitch in any part of the side, it is needless to say that the first blister was placed over that.—Say that diuretics are conjoined: viz. Squill; Sp. Æth. Nit.; juniper; iodide of potassium, and, when there is no irritation of the mucous membrane, the various other preparations of potass. Digitalis, by creating faintness, is apt to confuse the symptoms; I do not, therefere, use it till later. Where all these remedies had failed for two or three days, and dyspnœa continued as urgent as ever, I have occasionally used a powerful hydragogue, as half a grain to a grain of claterium, combined with calomel and capsicum to prevent nausea; or the Pulv. Jalap. Comp. ℈j.; so as to produce ten or twelve copious watery evacuations per day, stimulants being at hand in case of any sinking tendency. The effect of this has on several occasions been perfectly satisfactory, absorption in the chest having now made rapid progress. I derived this idea from a case already alluded to, in which a patient had an accidental hypercatharsis to the amount of sixty stools in two days, which emptied the chest in the same space of time. The patient is better in bed, both because it favors gentle transpiration and obviates faintness.

---

* It will be observed that, from this point, the form of private notes is adopted.

Remind that, hitherto, I have been treating a case in which the dyspnœa seemed imminently dangerous, and the most vigorous use of remedies consequently indispensable; but now explain that inconvenience sometimes resulted from hypersalivation; for, notwithstanding an immediate suspension of the mercury either on the first appearance of tenderness of the gums, or of amelioration of the symptions—especially the dyspnœa and obvious commencement of absorption, untoward salivation would occasionally occur and greatly retard the convalescence.—Explain that, on several times observing this, and having reason to believe that the patient could bear the dyspnœa with safety for some hours longer, provided he were prevented from rising, which creates faintness, (case of Mr. Smith, barrister,) I used more moderate quantities of mercury, being content to affect the gums within three or four days. In this way, the action of the remedy was easily controlled, either by omitting the mercury for two or three days, if its action is threatened to be considerable, or by merely diminishing it according to the evidence of the mouth and of the symptoms. I found, however, that it did not answer to suspend it altogether, but that a continuation of it daily in a mild form, as a blue-pill night and morning, or at night only, for the purpose of maintaining the first impression for a period of two or three weeks, or, in short, until all the disagreeable symptoms had disappeared, was attended with far better success.—Explain, further, that the great acceleration of pulse, which rises commonly to 120 or 130, and in young persons even to 150 or 160, and which is attended with what the patient calls 'internal fever,' thirst, craving for cold drinks, and dryness and heat of skin, is not necessarily a result of fever, but it *is* necessarily a result of anæmia, occasioned by the deficiency of oxygenation from the total incapacity of one lung at least. Here was the error made by Broussais, who supposed this to be fever and put his patient on the lowest diet. On the contrary, acting on the opposite principle, I always supply my patients with at least one or two pints of concentrated beef-tea, or plain ox-tail soup: and if the state of the tongue and alimentary canal fully authorises it, I permit them tender old mutton or beef for dinner. On this treatment, the pulse and 'internal fever' rapidly fall in proportion as the anæmia disappears.

Next proceed to those cases in which hectic is established, resulting, for the most part, I should imagine, from the fluids being of a puriform character—for, after a month or six weeks, and sometimes much earlier if the inflammation have been very intense, it assumes this character.—Allude to the opinion pretty prevalent that mercury is injurious in such cases, and say that I have not found it so, but that its use was still indispensable: for I have noticed that where it has been omitted, contrary to my wishes and instructions, a recurrence of the effusion has taken place, notwithstanding the use of mineral acids and the various other remedies usually considered available against hectic; whereas, on resuming mercury with opium, and giving the mineral acids for hectic, I have been enabled to restore matters to their former condition, though not without an extra shake to the patient. One of the best instances of this was presented by Sir Clifford Constable's coachman.—Dwell on this case; say that, after acute pleurisy of three weeks I saw him, and the chest was emptied in a week, but the mercury ordered to be continued. This, on my taking my leave, was omitted; and, as he seemed weak, (viz. merely from anæmia,) he was ordered ammonia, brandy, and other stimulants. In ten days, when I was again called in, his chest had refilled, and he now had a most violent hectic paroxysm at 11 o'clock, A. M., and again at 11, P. M. Each of these thoroughly drenched him, and during the extreme heat the pulse would rise to 150, being also barely perceptible. In this I saw nothing but a large quantity of pus in the circulation, which nature was endeavoring to throw off in her usual manner. I believed, in short, that the fluid in the chest was wholly purulent. I, therefore, continued the mercury and blisters in moderation, and made free use of the mineral acids, which, fortuuately, he bore perfectly well. During the brief intervals of the hectic paroxysms he exhibted that marked relief which we habitually see, and had always a keen appetite for his meals. He, accordingly, took as much mutton-chop, beef-steak, or roast or boiled mutton, as he was inclined to take. Under this treatment the chest was again emptied within the space of ten days; the hectic symptoms slowly gave way during the period of a month or six weeks, and I dismissed him convalescent to go to the country. I may add, however, that when the hectic was nearly gone, sulphate of iron was added to his sulphuric acid, in order to co-operate with the animal food in removing all remains of anæmia.—*Med. Chir. Rev.*

On Intestinal Obstruction from Stricture of the Sigmoid Flexure of the Colon.

BY T. P. TEALE, ESQ., F. L. S.,
Surgeon to the Leeds General Infirmary, &c.

Several attempts have been made to relieve congenital or acquired obstructions of the lower part of the intestinal canal by the establishment of an artificial anus; and different situations have been selected for the preternatural opening—namely, the perineal, the iliac, and the lumbar regions. The perineal operation is only applicable to cases of congenital obstruction. Acquired obstructions require the opening to be in the anterior or lateral part of the abdomen; and the operation in this situation is applicable also to congenital obstructions, and may be performed in such cases as are considered irremediable by an artificial opening in the perineum.

In 1720, M. Littre originally proposed the formation of artificial anus in the iliac region. According to his plan the abdominal walls and the peritoneum were divided, and the distended intestine was to be drawn out at the wound, and opened. He further proposed to retain the intestine in the cavity of the wound by a ligature passed through the mesentery, which should be allowed to remain a few days, until the bowel had become united by adhesion to the external wound.

M. Pillore, in 1776, modified the iliac operation of M. Littre, by uniting the wound of the intestine to the parietal wound by several points of suture.

The operations of Littre and Pillore have been performed in numerous instances. In the article Fistula Intestinal of the 'Cyclopædia of Practical Surgery,' I have arranged in tabular order twenty-four such cases, from which it will appear that, in several instances, the operation has been successfully performed, but at the same timo it is evident that the mortality was considerable; and in most instances, where the cause of death is stated in the reports, peritoneal inflammation led to the fatal result.

To obviate the danger incurred by opening the peritoneum, M. Callisen, of Copenhagen, proposed to open the colon in the lumbar region, where it is only partially covered by peritoneum, and he maintained that the intestine might be reached in this situation without opening the cavity of the abdomen. To accomplish this object, he proposed to make a vertical incision, extending from the edge of the false ribs parallel to the antorior border of the quadratus lumborum muscle. He thus hoped to reach the colon between the layers of its short and imperfect mesentery. The principal objection advanced against the operation of Callisen was, that in most instances it would be found impracticable, as the colon in the lumbar region was generally attached by a mesentery of considerable extent. It was, moreover, urged that Callisen himself found great difficulty in executing the operation on the dead body, and that in many instances he failed, the peritoneum having been unavoidably opened. Most surgeons, amongst whom was Dupuytren, agreed in condemning Callisen's proposal, and gave the preference to the iliac operation of Littre or Pillore, until within the last three or four years, when the operation of Callisen has been revived and modified by M. Amussat. This accomplished surgeon has shown that the failure of the operation on the dead subject was owing to the intestine being empty, and that in such cases as require the formation of an artificial anus the colon is greatly distended; in which condition the layers of peritoneum, forming its imperfect mesentery, are so far separated as to allow of the intestine being reached without opening the peritoneum. He has further introduced an important modification of the operation of Callisen by adopting the transverse instead of the vertical incision of the integuments and muscles.

M. Amussat has performed the operation five times. Four of the cases were perfectly successful. The subject of the fifth case died on the tenth day from the progress of the carcinomatous disease, but had experienced great relief from the artificial opening.

The case which I now submit to the profession affords another instance of the easy practicability of the operation, and of the relief which it is capable of affording. Had it been performed a few days earlier, before the cæcum had been irrecoverably injured by the extreme distension, it is not improbable that the result would have been fortunate.

[The patient, Mrs. Wager, had been subject to constipation from her youth; and from certain causes, on the 18th of February, complete obstruction occurred. On the 1st of March Mr. Teale first saw the case, and on passing a small ivory ball attached to a silver stem up the rectum, it was arrested at the distance of about six and a half inches above the anus. Powerful injections were tried in vain, as they did not pass the strictured portion; and it was ultimately agreed to make an artificial anus in the lumbar region. This was done in the presence of Mr. Samuel Smith and Mr. William Hey. It was decided to open the colon after the manner of Callisen modified by M. Amussat. It was supposed that the upper part of the rectum was contracted, and that the constriction might extend to some little distance, but that the descending colon was not implicated, on account of the prominent elastic and highly tympanitic state of the left lumbar region: for this reason the left lumbar region was selected for the operation, which is thus described by Mr. Gibbes.]

The patient being placed upon a table, on the right side, with the face and abdomen inclining downwards, Mr. Teale made an incision through the integuments four and a half inches in length, extending forwards from the outer edge of the sacro-lumbalis and longissimus dorsi muscles, midway between the lower ribs and the crest of the ilium, nearly parallel to the latter. The different layers of aponeurosis and muscles having been divided in succession upon a director, a considerable mass of fat was forcibly protruded at the wound. By the finger the packets of fat were detached, and the posterior surface of the colon was very readily felt, extremely tense and elastic, and was soon exposed to view, its pale blue tint and translucent aspect contrasting strongly with the opaque white fat in the neighborhood. Two temporary ligatures were passed through the muscular and mucous coats of the colon, and a considerable quantity of air escaped through the punctures, which so far diminished the tension of the intestine, that Mr. Teale was enabled to pinch up a fold of it, and to open it with the scalpel, after which there was a profuse discharge of air and liquid fæces. The opening in the intestine was further dilated in a vertical direction by a probe-pointed bistoury to such an extent as to allow of the introduction of three fingers. The edges of the intestinal aperture were then fixed to the external wound by four points of suture, and the wound of the integuments was united by two twisted sutures. The operation being completed, Mr. Teale, and other surgeons present, introduced the forefinger into the artificial anus, and ascertained that the colon immediately below the aperture formed a thickened corrugated pouch, from which no opening into the lower part of the intestine could be detected, without instituting a more tedious search than was considered justifiable. The intestinal tunics forming this pouch, although much thickened, and firmer than natural, did not communicate to the touch the indurated feeling of scirrhus. On passing the finger upwards into the descending colon, it was found to be capacious, its coats thin and elastic, possessing a perfectly healthy structure.

[The patient experienced considerable relief after the operation, and in many respects, might be said to be doing well for several days; the fæces finding their way through the wound regularly. Bronchitis, however, came on, on the fifth or sixth day, and she rapidly sank.]

Examination of the body four hours after death.—On opening the abdomen a considerable quantity of liquid and solid fecal matter was found in the pelvis, and a large ragged opening, through which the fæces had escaped, was seen in the cæcum. The coats of the cæcum were extremely thin and softened, and dilated into a large pouch, which adhered to the neighboring folds of intestine. The mucous membrane of the cæcum was of a deep red color, and exhibited some small superficial ulcers. These morbid appearances were entirely limited to the cæcum. The ascending, transverse, and descending portions of the colon were empty, and appeared perfectly healthy. The artificial opening had been made at the lower part of the descending colon. The site of the operation could not be detected by examining this portion of intestine from the opened cavity of the abdomen, nor was there the slightest trace of peritoneal inflammation, or lesion of the peritoneum, in the neighborhood of the descending colon. Immediately below the artificial opening, the coats of the intestine were thickened; the mucous membrane had a granulated feel, and there existed at this part a firm, circular stricture, that would only allow of the passage of a full-sized urethra bougie. This stricture was situated eighteen inches above the anus. Below the stricture, as far as within six or seven inches of the anus, the intestine was reduced much below its natural calibre, but its coats did not exhibit any obvious alteration of structure. So great was the contraction of this part of the tube, that the tip of the forefinger was very tightly embraced by it throughout its whole extent, but by using a considerable degree of force, the coats of the intestine admitted of being dilated to such a degree as to allow the forefinger to be pushed through successive portions of the tube, until it reached the upper part of the sigmoid flexure, when it was firmly arrested by the unyielding and contracted coats of the bowel; these, however, did not exhibit in the slightest degress the induration or altered structure characteristic of carcinoma.

The left pleura presented numerous recent adhesions. The bronchial mucous membrane was a little injected, particularly in the smaller ramifications. A small portion of the middle lobe of the right lung was hepatised; heart and pericardium healthy.—*Prov. Med. and Sur. Jour.*

[It appears from the perusal of all the cases related by Amussat, as well as this one of Mr. Teale's, that the subjects were more or less advanced in life. This interesting operation, however, may be applicable to the earliest periods of life, as will be seen in the following case of Mr. Parrot. It occurred in an infant whose mother was thirty years of age, and in every respect healthy.

The nurse observed that the infant parted with no meconium, and on examination, found that some obstruction existed. It was found that a cul de sac existed about an inch and a half from the anus. M. Larrey plunged a trochar into the cul de sac, but no meconium escaped: the child was taken to Dr. Amussat when it was forty-eight hours old. This gentleman was of opinion, that about two inches from the anus there existed an interruption to the rectum, the calibre of the gut being at this point totally obliterated. It was also his opinion, that an artificial anus could not be made either in the anal or coccygeal regions, and he therefore was determined to open the colon in the left lumbar region.]

The child being placed on the right side, a transverse incision, about two inches in length, was made midway between the crest of the ilium and the last false rib, commencing at the external border of the sacro-lumbalis and longissimus dorsi: the subjacent textures having been divided, the cellular and adipose tissue covering the kidney and colon was exposed. This was now, after a long and careful dissection, divided, after a great deal of uncertainty. The lower extremity of the kidney was fully exposed to view, but the intestine could not yet be recognized. The incision was, therefore, enlarged backwards and downwards (with an artificial light, the shutters having been closed,) and Dr. Amussat saw (for his feeling did not afford him any certain indication) something of a violet color, which he judged to be the small intestine, placed outside, and before the kidney. That was pushed backwards, and the colon at length detected. Two tenacula were now introduced longitudinally, one from above downwards, the other in a contrary direction, in order to prevent any retraction of the bowel, and a longitudinal incision afterwards made. A considerable quantity of gas and meconium escaped. The edges of the opening in the intestine were fixed to the integuments by means of three autures, and tepid injections administered. The hæmorrhage which occurred during the operation was easily suppressed by means of torsion. The artificial anus was now covered by a hot cataplasm, and the child removed home.

[The case improved daily, the wound looking healthy, and the fæces continuing to pass through it regularly. On the fourteenth or fifteenth day, the fæces were obstructed for forty-eight hours; bougies were introduced and injections used, and the fæces passed once more. The case continued to do well.]—*London Medical Gazette.*

On the Hot and Cold Forms of Rheumatism and their Treatment.

BY DR. TAYLOR,

Professor of Clinical Medicine in University College, &c.

[The first patient upon whom the following clinical remarks were made, was a cabman, exposed to all kinds of weather: he had syphilis about three years ago, and was in the habit of taking freely of spirits. About two months before admission to the hospital he was wet through, and this was followed by the rheumatic pains, first in the head, and then all over the limbs:—]

The only disease with which this could be confounded was secondary syphilis. The man had had syphilis three years before, and had had occasional pains in his limbs ever since, but he had been constantly exposed, as a cabman, to the causes of rheumatism; there was no irregularity of the spine of the tibia, and he had had no other secondary symptoms. It was necessary not only to distinguish whether the disease was rheumatism, but also the kind of rheumatism. One of the most important practical divisions of this disease was into the hot and cold forms. In the hot rheumatism, the pains were aggravated by the heat of the fire and of the bed-clothes, and there might, or might not be, in addition, local increase of temperature with more or less febrile reaction. On the other hand, the pains were relieved by cold—by uncovering the part, and in some cases even by cold applications. In the cold rheumatism, the pains were increased by this exposure, and were relieved by warmth, by approaching the fire, by flannels, and abundant clothing: in some cases the patients felt chilly, and complained that they never could get warm; the skin was often pale and the surface cool. In making this diagnosis it was important to know that in both forms the pains were worse at night than during the day. Patients on being asked if they felt worse when warm, often replied that they were worse when warm in bed at night; but this answer was not enough, we must inquire the effect of heat and cold during the day. It was necessary not to confound the hot and cold with the acute and chronic forms of rheumatism. The acute rheumatism was always hot, but the hot rheumatism was not always acute; it might go on for many months, and therefore be of the chronic form. The cold variety, however, was generally, though not necessarily, chronic; he first learnt this distinction from Dr. Elliotson, and had since verified it in innumerable instances. Whether the observation originated with Dr. E. he did not know. The value of the distinction consisted in its affording a guide to the treatment; the one variety being chiefly, not exclusively, relieved by one class of remedies; the other by a different class. It was in the hot rheumatism that bleeding, general and local, colchicum and mercury, were most serviceable: in the cold form, stimulating remedies were more useful, such, for instance, as guaiacum, steel, rubefacient liniments, the hot-bath, and iodide of potassium. In the present case, the disease belonged to the cold form; the patient had suffered more or less during a great part of the preceding winter, and he had become considerably reduced in flesh; the heart offered nothing morbid with the exception of the sound at the base; the second sound was less clear than in health, and had a dry and hard character; it was such a sound as might be supposed to arise from valves whose texture had become less flexible and more rigid, and it had been observed to accompany a thickened state of the valves.

This was the opinion put forth by M. Bouillaud, and Dr. Taylor had made the same observation independently of him. The valves might still perform their functions, but less readily, perhaps, than in their healthy state: M. Bouillaud had termed this sound 'bruit de parchemin,' from its supposed resemblance to that which might be produced by valves made of parchment.

Causes.—The cause in this case was that almost always observed in rheumatism; namely, exposure to cold. The patient was a cabman, out in all kinds of weather, and during a great part of the day.

Treatment.—The medicine administered was the iodide of potassium, which was, perhaps, the most generally useful. All remedies would fail in particular cases, but this, perhaps, less frequently than any other. The dose was three grains at first, but was gradually increased until an effect was produced. Fomentations were ordered to the right leg a day or two after his admission, with immediate relief to that part; and this was all that was done, in addition to giving the medicine. For three or four days no amendment was observed in the pains generally, but about that time they began to yield, and soon disappeared entirely.

The patient's appetite returned, and he was discharged cured, on the 24th, about a fortnight after his admission. The patient had suffered during a great part of the winter, and his general health was much impaired by suffering. Dr. Taylor remarked that he had frequently seen cases of rheumatism, especially those affecting the fibrous tissues, and which had resisted other modes of treatment for months, yield in a few days to the iodide of potassium.

About a month after his discharge, the patient was readmitted, nearly as bad as before. There had been a succession of wet days when he had been out, and the symptoms were reproduced. On this occasion the form of the disease was the same, it was only a little less severe. The same treatment was prescribed, and continued for several days, but without the slightest effect; whether, if persevered in, it would have made any impression, was uncertain, but it was continued longer than the time in which an improvement was produced in the first attack; and generally the iodide of potassium produced its effect in a shorter time than this. The guaiacum mixture, with the compound tincture of guaiacum, was given on the first of November, and it produced almost immediate relief. The patient felt better after he had taken four doses only of the medicine; and this improvement went on and continued permanent: the only other sensible effect it produced, was a pretty abundant perspiration. On the 6th of November the patient was discharged well. Dr. Taylor remarked that the result of the treatment in this case was very interesting: he had before stated that different classes of remedies appeared to be suited to the hot and the cold rheumatism, and that in each form the same remedy succeeded at one time and failed at another. He had frequently thought that closer observation might enable us to discriminate the particular cases suited to each remedy; and had observed, for example, that the iodide of potassium was peculiarly useful in cases in which the disease affected the fibrous tissues, as that over the tibia and in the scalp. In this case, however, there was no apparent difference in the disease to explain the different results. The second attack was only rather less severe than the first; the form and seat of the disease were the same, as were also the age, strength, and the external circumstances, as food, lodging, and, of course, the constitutional peculiarities of the patient. No two attacks could be more completely alike, and yet in one the treatment was speedily and completely successful, whilst in the other the same treatment as completely failed.—*London Lancet.*

On Rheumatic Dermalgia.

BY J. H. S. BEAU.

Neuralgia of the skin has hitherto been usually confounded with pains of the nervous trunks, muscles, &c. M. Piorry was the first who referred it to a separate head under the name of dermalgia. It frequently coexists with neuralgia of the nervous trunks, with ramolissement of the brain; or occurs in cases of inflammation of the spinal cord. Severe pain in the uterus is often attended with dermalgia of the skin of the pelvis and thighs, and clavus hystericus is frequently a neuralgic affection of the skin.

There are several other forms of this affection, but one which has escaped notice down to the present time is rheumatic dermalgia. This is of more frequent occurrence among men than women, and is induced by damp, cold, and those other causes to which rheumatism generally is owing. Hence it is most common at the beginning of spring. The head and lower extremities are the parts usually attacked, but the pain is not stationary in one place; often changing its seat in a gradual manner, just as erysipelas sometimes wanders from place to place. Patients experience two kinds of pain, the one abiding, the other intermittent and severe, resembling the prick of a pin or an electric shock, and recurring about every thirty seconds. The abiding pain is frequently little more than a permanent exaltation of the natural sensibility of the skin. Friction of the part with the finger or with the patient's press, always increases the pain; and if the affected part is covered with hair, very severe suffering may be produced by passing the hand over the hair. The intermittent pain is often at once excited by touching the part in this manner, and though firmer pressure puts a stop to the permanent pain, the return of the intermittent pain cannot be thus prevented. The intermittent pain is always considerably worse at night. Rheumatism of the skin usually alternates with that form of the disease which affects the muscular and fibrous tissues. Its usual duration is from a day to a couple of days, and it subsides by degrees just in the same way as it made its attack. The author met with three instances in which it was accompanied with fever, and involved a much larger surface of skin than usual. It is, generally, an affection easily curable. The indications for its treatment do not differ from those to be observed in ordinary rheumatism, but it does not generally require any very active remedial measures. To prevent its recurrence, it is always desirable for the patient to wear flannel next his skin.—*Brit. and For. Med. Review.*

ITEMS AND INTELLIGENCE.

The Art of Plagiarism.

'*Risum teneatis, amicis ?*'—Hor. Art. Poetic.

TO THE EDITOR OF THE LANCET.

Mr. Editor:—

D'Israeli, in his 'Curiosities of Literature,' has an excellent chapter on 'Professors of Plagiarism.' He tells us of one 'Richesource, *a miserable declaimer*,' who taught 'in what manner a person destitute of literary talents might become eminent for literature.' He published the principles of his art under the title of 'The Mask of Orators; or the manner of disguising with ease all kinds of composition; briefs, sermons, panegyrics, funeral orations, dedications, speeches, letters, passages, &c.' In this learned, and, doubtless, to some persons, very useful work, the ingenious author remarks that, 'all who apply themselves to literature, do not always find, from their own funds, a sufficient supply to ensure success.' For such he labors, and teaches to gather, in the gardens of others, those fruits of which their own sterile grounds are destitute; but so artfully to gather that the public shall not perceive their depredations. This art he calls '*Plagiarism*,' and defines it to be 'the art, or an ingenious and easy mode, which some adroitly employ, to change, or disguise, all sorts of speeches of their own composition, or of that of other authors, for their pleasure or their utility; in such a manner that it becomes impossible, *even for the author himself*, to recognize his own work, his own genius, and his own style, so skilfully shall the whole be disguised.' We are then informed in what manner we are to manage the whole economy of the piece which is to be copied, or disguised; and which consists in giving a new order to the parts, changing the phrases, words, &c. An orator, for instance, having said that a plenipotentiary should possess three qualities,—*probity*, *capacity*, and *courage;* the plagiarist, on the contrary, may employ *courage*, *capacity*, and *probity*. This is only for a general rule, for this is too simple to practice frequently. To render the part perfect we must make it more complex, by changing the whole of the expressions. The plagiarist, instead of *courage*, will put *force*, *constancy*, or *vigor*. For *probity*, he may say *virtue*, or *sincerity*. Instead of *capacity*, he may substitute *erudition*, *ability*, or *science*. Or he may disguise the whole by saying, that *the plenipotentiary should be firm, virtuous, and able.*

Now, my object in this communication, is to inquire whether the '*Phenomenon*' is not in possession of this valuable work of Richesource, entitled '*The Mask of Orators*,' for I think the specimens you have presented, as well as *all his other published works* which I have seen, show very clearly that he has studied it with some attention. The 'Mask,' it is true, was unfortunately not put on with sufficient care to prevent its being torn off, or perhaps the materials were too gauze-like in their texture; but still, I must believe that the learned Professor has profited by the lessons contained within its pages. I might give you examples from his 'Introductory' of every species of 'disguising' recommended by Richesource, and illustrate them by other examples quoted from his other Introductories, where the same idea is put into entire new dress, or disguised by some slight change, or indeed, left in *puris naturalibus*. Sometimes the head and tail of a sentence are brought together, like the extremities of a hoop-snake, and it thus rolls its length along. Sometimes its members are disjointed, like the tail of Dr. Mott; sometimes its body eviscerated, or its trunk decapitated; and altogether the most astonishing transformations brought about. All this speaks loudly of the genius and talent of the *artiste*. But the 'Phenomenon,' it seems, has gone still further, and ventured to take a higher degree in this school of art. He has not only learned to *imitate* the best authors, but to *steal* from them. Examples of this, you have also given, and thus saved the trouble of quotation. A writer in the Courier and Enquirer defends this art, because Dr. Dunglison is also accused of the same species of petty larceny. This, I suppose, belongs to that kind of logic, called reasoning from analogy. 'It is not likely that Dr. D. would commit such *felo de se*, ergo Dr. Bedford is innocent!' This defence will doubtless prove entirely satisfactory to the supporters of this *manahin*. With many thanks for your manly independence, and especially for your zeal in the cause of medical educational reform, I remain, your triend,

A Country Subscriber.

['The Phenomenon' is now so well and accurately known from Maine to Florida, that we are hardly excusable in occupying any portion of our space with him—the respectable and influential character of this correspondent, however, has induced us to insert his communication. With *such* a Professor of Obstetrics and Diseases of Women and Children, is it any wonder that *all* the students of the Stuyvesant School of Medicine and Pharmacy who applied for admission to naval medical service were rejected?—Ed.]

Baron Larry, the celebrated French surgeon, died at Lyons, aged 76 years.

Dr. Barton, U. S. N., has been appointed chief of the newly organized Bureau of Medicine and Surgery.

Dr. Allison has succeeded Dr. Howe as Professor of Medicine in Edinburgh University.

Abdominal Snpporters.

A Mr. Ross, of this city, has submitted to our inspection a very neat and ingenious abdominal supporter. We greatly admire the simplicity of the instrument; and as its price puts it within the reach of those sufferers whose pecuniary means are limited, we feel pleasure in commending it to favorable notice.

Books, &c. Received.

The Family Physician; or, the Reformed System of Medicine: on Vegetoble or Botanical Principles. Being a compendium of the 'American Practice.' Designed for all Classes. In Nine Parts. Part I.—The Means of preventing Disease, and promoting Health. Part II.—General Principles of the Reformed Practice of Medicine, and Indications of Cure. Part III.—Internal Diseases. Part IV.—Surgicol Diseases. Part V.—Midwifery. Part VI.—Vegetable Materia Medica. Part VII.—Pharmacy and Dispensotory; or Compounds. Part VIII.—Diet for the Heolthy and the Sick. Part IX.—Outlines of Anatomy and Physiology, with Illustrations. Appendix. This Work embraces the Character, Causes, Symptoms, and Treatment of the Diseases of Men, Women, and Children, of all Climates. By W. Beach, M. D., Member of the Medical Society of the City and County of New York. Complete in One Volume. Illustrated with nearly two hundred Engravings. New York: Published by the Author, No. 223 Bowery. 1842.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Sept. 17, 1842.

36 Men, 21 Women, 64 Boys, 58 Girls. Total, 179.

DISEASES.

Apoplexy	1	Intemperance	0
Asthma	1	Inflammation	1
Asphyxia	1	Of liver	1
Abscess	1	Of bladder	0
Abortion	0	Of brain	3
Bleeding	1	Of stomach	1
Bleeding from stomach	0	Of throat	1
Bleeding from uterus	0	Of lungs	3
Burned or scalded	1	Of bowels	2
Carbuncle	1	Of womb	0
Cholera infantum	28	Of kidneys	0
Cholera morbus	0	Insanity	0
Congestion of the Brain	2	Jaundice	0
Consumption	23	Killed by fighting	1
Convulsions	12	Lues Venera	0
Croup or hives	0	Mortification	2
Debility	2	Malformation	1
Delirium tremens	0	Marasmus	10
Diabetes	0	Measles	1
Diarrhœa	5	Old age	4
Death from poison	0	Ossification of the larynx	1
Dropsy	4	Palsy	4
Dropsy in head	9	Retention of urine	1
Dropsy in the chest	0	Rheumatism	1
Drowned	5	Spinal disease	0
Dysentery	12	Suicide	0
Erysipelas	1	Sprue	0
Executed	0	Small-pox	1
Fever	1	Tumor	1
Scarlet	5	Teething	3
Typhoid	5	Ulceration of intestines	2
Puerperal	0	Unknown	2
Remittent	0	Ulceration of throat	0
Billious	2	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	6
Fracture	0	Worms	0

AGES.

Of 1 year and under, 53; between 1 and 2, 37; 2 and 5, 11; 5 and 10, 11; 10 and 20, 6; 20 and 30, 17; 30 and 40, 16; 40 and 50, 13; 50 and 60, 6; 60 and 70, 3; 70 and 80, 1; 80 and 90, 2; 90 and 100, 1; 100 and upwards, 0; unknown, 2.

John H. Griscom, City Inspector.

City Inspector's Office, Sept. 19, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, OCTOBER 1, 1842. No. 14.

[FOR THE NEW YORK LANCET.]

AIR BUBBLES IN THE FLUIDS OF THE EYE.

Muscæ Volitantes.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. I.

1. If we look through a pin hole, either at the clear sky, or at a candle, we shall perceive that the hole is completely filled by the halo of which I speak in another place, and that it assumes the character of a perfect lens. The light which enters the axis of the eye falls on the cerebral organs of vision without any other obstruction than that which is caused by the spots existing between the laminæ of the cornea and crystalline lens, and by the floating air bubbles in the different humors of the eye.

2. If the eye was perfectly free from these spots and bubbles, and no external object intervened between the light and the pin hole, light would only appear as luminousness; there could be neither shape nor form of any kind, excepting that this luminousness—which is light in its perceptible state—would be bounded by an outline, and which outline is the periphery of the pupil.

3. When light—for so I must call it, although I consider light as the latent principle, and luminousness as the perceptible effect—is transmitted through a small lens of short focus, such as a pin hole, the whole apparatus of the eyeball is as much an object of perception to mental vision as the pin hole itself. For when the lens of the pin hole is close to the eye, so as to exclude all light excepting that which comes through the hole, the rays being now of feeble power, are obstructed by the small objects which are within the eye, and which lie in the direct route of the rays.

4. There are various ways of seeing these obstructions, such as spots, floating bubbles and muscæ; but by whatever mode we do see them, an external lens of some kind, is the medium. A drop of water is a very powerful lens, so is a pin hole, and by referring to the chapter on Halos it will be seen why it is so. The minute intersections between the threads of coarse black muslin are very good lenses for this purpose. A pin hole in a piece of stout black satin makes a beautiful lens. Obstructions within the eyeball can be seen with great distinctness through such lenses, when they are held closely to the eye while looking at the clear sky or a bright candle. But for those who are not very expert in the use of lenses, a large pin hole in a card, and *covered with saliva,* conveys the most distinct and exact representation of all these phenomena.

5. If we suspend a drop of water on the point of a large pin or needle, and hold the drop close to the eye, just so as to clear the eyelashes, the *oblique* rays from a bright candle will be brought to a focus on the drop of water. Whatever obstruction these rays meet, as they enter the pupil and pass through the crystalline lens, is faithfully transmitted to the *cerebral* organs of vision. It is *there* alone that the perceiving power has any intimation of what is passing externally, for all in front of the optic nerve as it leaves the tubercular quadrigemina, is external to the cerebral, or *true* organs of vision. It cannot be too often repeated that the eyeball is merely a telescope to the perceiving powers—a mere instrument through which light passes, and that it is itself an object of perception, for all within it can be seen quite as distinctly as if the apparatus was external to the eye.

6. Now on a close inspection of the object which we see on the drop of water—on which place we imagine it to rest—the first thing that presents itself is a round figure, demi-transparent, of a gauzy texture, and of an inch or an inch and a half in diameter. This object, or figure, as I am forced to call it, for the want of a better term, stands upright, as it were, unsupported, and so thin in substance that whatever is behind is distinctly seen. The drop of water seems entirely to have disappeared, and nothing but this curious misty figure is visible.

7. The outer edge appears as if surrounded with short rays of light issuing from the periphery at right angles, but these rays are not constant, nor are they always of the same length, and unless attention is particularly directed to them, they would frequently pass unnoticed.

8. The outline of this figure is not of a true circle, but wavy, and it contracts and expands with every motion of the hand, either in bringing the drop nearer or in putting it further from the eye. But the most conspicuous contraction is when the closed eye is suddenly opened. The figure not only contracts but it becomes more *dense*, so that objects behind it are not so plainly seen—by objects behind it, I mean those that are in the room, or on the side furthest from the eye. In such experiments it is proper to keep one eye shut.

9. On this gauzy texture there are a number of curious spots, some in groups of four or five, and others standing single at irregular distances. Some have a dark centre surrounded by a narrow rim of faint light, and others, on the contrary, have a light centre and a dark rim. These spots are permanent, nor can I perceive in my own eye, or learn from others who have made the experiments, that any change, either in size or structure, has taken place since I first made the discovery. A few of these spots are not truly circular, being a little depressed at the edges.

10. The larger and most conspicuous of these *permanent* spots are on the margin of this round figure, which margin is of a fine and more delicate texture than the centre. They are evidently situated in the cornea, and of course, when the pupil contracts, being on the verge of the pupillary outline, they are shut out, as it were, and are only visible again when the pupil expands. Opening the closed eye, as was before observed, will produce the contraction, and thus shut out the marginal spots. Besides this contractile movement, there is a tremulous motion of the figure itself, but this arises from the mobility of the eye and the unsteadiness of the hand.

11. These fixed spots are not distinct bodies, or excrescences; they are always perceptible on these figures, and are nothing more or less than the circles which surround every minute point of contact between laminæ, whether transparent or opaque. They exist between flakes of mica, in short, between the laminæ of the cornea, and all substances composed of layers.

12. There are no two substances so truly smooth as to touch at all points; when they come in contact there will, of course, be unequal pressure, and

the pressure is the greatest where these little inequalities of surface exist. The points of contact between the laminæ of the cornea are designated by the presence of these dark and light spots, surrounded by dark and light circles. Under certain angles of light some of these spots become prismatic, and present a beautiful appearance; but this is common to all minute points or small elevations between thin layers of transparent bodies. Such spots as these are very often seen in glass lenses, and are very perplexing to moeroscopic observers; they are caused by small particles of foreign substances which find their way into the glass when in a fluid state. Sometimes they proceed from minute air bubbles within the glass, a halo of transparent light always encircles these flaws.

13. The fixed spots, therefore, thus seen by means of the *oblique* rays of light from the candle, proceeding, apparently, from the drop of water, are those points of the laminæ of the cornea which are in closer contact than others. The *web-like plexus* seen in the centre of the figure, the interstices of which are of irregular size, proceeds also from irregular contact; but the pressure being more feeble, or perhaps the interstitial points being less prominent, the plexus is but faintly marked.

14. Independently of the above spots permanently fixed, and always appearing the same under every aspect, there is another variety. There are *black* spots without any margin of light, and of irregular shape; they exist under peculiar circumstances either among the globules of the mucous membrane called the retina, or among the membranes of the choroids. Sometimes, though rarely, they are seen on the margin of the lenticular capsule, but they are very few in number.

15. All these fixed spots can be seen on the lenses which I have described, and we sometimes meet with a glass lens, of short focus, which shows this figure with its curious spots, in the most brilliant manner. This lens is also held near the eye, but instead of looking through it at the candle, we are to look at the table, so that the oblique rays of light can strike it. It requires some knowledge of the management of lenses to observe the figure clearly, but a little perseverance will conquer all difficulties, and the novel appearance of the figure will fully repay us for the trouble. Practice will soon teach us how to place the lens so as to allow the *oblique* rays from the candle to illuminate the figures, and when we have succeeded, we shall perceive that the spots are more conspicuous than those on any other lens. We not only see all that is perceptible on the drop of water and on the pin hole, but they appear more distinct, and the black, marginless spots are here plainly seen also.

16. After a number of trials, and we begin to know all the different spots, for, as I observed, they are always present, we can then attend to the peculiar character of each. If there exist one upon the crystalline lens, it can be readily distinguished from all others by its zigzag motion when the eyeball moves; it is a slight, jerking motion, as if the spot changed its place. It must be obvious, however, that this is not the case, for the spot or spots are permanently fixed, and the cause of the apparent motion is in the change of position of the eyeball itself. If a small speck is seen on the surface of any glass lens, it will appear to change its place whenever the lens is turned to the right or left, and according to the *thickness* of the glass will the extent of motion be.

17. If these spots existed on the iris, its motion would not be of that peculiar kind; the contraction of the pupil would cause them to move in straight lines, and without that jerking motion which distinguishes them when on the lens. Besides, spots of that nature could not remain in situ on the iris for any length of time, as they would be absorbed, or else produce some material derangement.

18. In speaking of any blemish on the crystalline or its capsule, I am well aware that the oculist would say, at once, that a spot of this kind is the precursor of cataract. But those I describe are altogether of a different nature from those milky, blurred patches which finally occupy the entire lens. When we consider that the gauzy figure, though proceeding from an inappreciable point of light, is magnified to so large a diameter as an inch and a half, we can readily imagine how very minute the spot on the lens must be when in its perceptible state it is not the thousandth part of the size of the figure on which it is seen, and that figure, we know, receives its outline from the small pin hole. These lenticular spots, however, are rare; I have never known them to exist in more than five or six eyes, and although they were to be seen upwards of fifteen years ago, there is no increase in their size or change in their position, nor have they impaired vision in the slightest degree.

19. Here, therefore, are two distinct kinds of *permanent* spots, those existing between the laminæ of the cornea; innumerable and never varying in shape or number, with dark or light centres and light or dark margins, and those which exist on the lens or the lenticular capsule, and which appear to move, though in reality they are as firmly fixed as the others. Their motion, as I observed, is illusory, and it proceeds from the change in the position of the eye. If a speck of dust is laid on a common glass lens, and we give the lens the same right and left or zigzag motion, the speck of dust will take the same motion. They exist undoubtedly on the lens, for there is no other part of the apparatus which has the same transparency and thickness.

20. As to the third kind of spots, black and of irregular shape, although they are stationary for a time, yet they disappear and leave no trace. They exist among the tissues either of the eye or the brain, and are absorbed when the exciting cause is removed. I have known them to appear after some excess either in eating, or drinking, after hard exercise, or after a sleepless night.

21. Now, as to the contraction of the figure; for that it does contract we must all allow, as nothing is more apparent; on what part of the organs of vision is it *perceptible?* As I have abundantly proved that the eye itself is as much an object of perception as any other external image, we surely cannot suppose that the contraction takes place in the *eyeball*, for that organ is merely a transmitting medium. The wire coils are a good illustration of my meaning, the ends in connection with the galvanic aura, are placed with reference to the other ends. The words intended to be conveyed by this telegraph, are not formed on any part of the wire; whether coiled up or in a continuous length, the impression runs along, as it were, to the terminal points at the other end, where it is stamped, so to say, upon the surface suited to receive it—and it is effected *instanter.*

22. It is in this way that light operates on the eye, only that the obstructions to the rays from the whole angle of vision, is the cause of our seeing the objects or obstructions. The moment, therefore, that light touches the machinery of the eye, in that instant of time the mind is made acquainted with the objects before the eyeball, for within the great cone of light falling on the eye from the whole field of vision, are the objects to be examined. These objects obstruct the rays from the great cone and form innumerable small cones from themselves, all descriptive of the elevations and depressions of their outline and surface, and we thus obtain a knowledge of the objects by the very light which they intercept.

23. The moment, therefore, that the light, from external bodies, touches the eyeball, that very moment the impression of these bodies is made on the cerebral organs of vision, and as long as we are gazing on the external objects, so long will the perception be vivid. Now the light from two cones, for each eye receives a cone, falling on the cornea, will be of double intensity on the cerebral organs, and the contractile power of light is no where so manifest as when looking through a narrow slit, pin hole, or on a drop of water.

24. If we examine the pupil while one eye is closed, we shall find it of a certain diameter; but if we keep our eye steadily fixed on it and then open the

closed eye, it will be perceived that the pupil at which we were first looking contracted the moment the closed eye opened.

25. Now in which way could this have been effected but by the double portion of light thrown on the *cerebral* organs of vision, where the over-lapping of the optic nerve occurs. It is *there* that the contraction takes place, and it is *there* that we perceive it. Light, we know, has the power of contracting the muscular and nervous tissues of the eye, and as the optic nerves, at their origin in the brain, have a unity of character, and are identified as one, commingling, yet lying evenly over each other, what contracts one pupil will contract the other, for the whole apparatus of the eye is moved, synchronously, by one impulse and by one agent.

26. I ask again how could the pupil contract when the closed eye opened, unless the cerebral portion of the apparatus contracted, for the opening of the closed eye does not necessarily cause more light to enter the pupil of the other—how could it. Besides, no extra light *could* fall on the eye, as the opening of the other one does not give additional luminousness to the candle.

27. While we are examining the figure on the drop of water which is close to the eye, all the light which is reflected from the drop enters the axis of the pupil. The eye is turned away from the candle, and it is only by the oblique rays that we get the reflected light from the drop of water. If the closed eye is suddenly opened, more light will fall on that eye, not only that it proceeds from a self-luminous body, but that there is a large cone of it; and as it respects a pin hole, the light from which produces the same effect as it does from a drop of water, the card is held so closely to the eye that no other light could by any possibility enter that eye, yet the same contraction of the figure takes place as soon as the closed eye opens as with the drop of water.

28. I have already observed that the whole apparatus of the eyeball moves synchronously—from the apex or focal point of the cornea to the *tubercular quadrigemina*. Here, or somewhere near it, is the origin of the two optic nerves, springing from the same root, and lying evenly and accurately over one another, as I shall prove in a subsequent part of this memoir. The luminous impulse which one eye transmits to this cerebral focus equally affects the other, that is to say, the action of light is imparted to the cerebral focus of both optic nerves. The nervous apparatus there, being exactly alike, fitting *over* each other with such precision, similarity, and close contact, that they must, necessarily, be similarly affected by the action of light. But this does not alter the *diameter* of the objects within the figure—*that* remains the same.

29. The contraction which takes place at this cerebral focus, must be felt throughout the base or origin of the two nerves, and, consequently, as only the iridic nerves and muscles are concerned in the operations of light, and this operation is to *contract* as well as to illuminate; the pupillary diameter is the only part of the apparatus which suffers decrease. The spots, therefore, between the laminæ of the cornea remain the same in magnitude and position, but in consequence of the diminution of the diameter of the pupil by the contraction of the sphincter muscle of the iris, those spots which lie on the verge of the figure are shut out when the pupil contracts.

30. This appears to me to be the true theory of the contraction of the figure when the closed eye suddenly opens, whether on edges, between the fingers, in narrow slits, and in small apertures. It accounts philosophically for the appearance and disappearance of the fixed spots, I mean those on the margin, and for the increased density of light as well as for the decrease in the diameter of the figure. I trust that I have expressed myself clearly, but the subject is still so new to others that I fear further explanation may be necessary; at present, however, I must return to the figure produced by the light reflected from the drop of water.

31. There are, therefore, two kinds of fixed spots always perceptible in this way—those within the lamellæ of the cornea, and those on the lens or the lenticular capsule. The third kind of fixed spots previously mentioned, are produced by engorgement, and are perceptible at all times to those who are troubled with them, particularly in the morning on rising. They are in dark blotches of irregular shape, seldom round, and sometimes presenting themselves in straight or curved lines. These proceed, as I before observed, from some local or general disturbance, such as vomiting, blows on the head, or indigestion. I have known upwards of a dozen appear in an eye after violent exercise on horseback, or after running and jumping; the blood in all these cases having been forced to the terminal points of the delicate and minute vessels. These spots, however, are frequently absorbed, and regularity and abstinence will prevent their return.

32. There are three other kind of objects or spots seen on the same figure where the fixed spots exist. The first in order occupy the fluid which lubricates the conjunctiva, and they are the largest and most distinct of the three. They are never united, but fall down like small drops of rain, and are generally of an oblong shape; and they certainly owe their motion, which *apparently* is a downward one, to the winking of the eyelids. They are not at all times perfectly transparent, and are never perceptible till the act of winking takes place.

33. The second kind are always found in the aqueous humor; they are transparent globules of air, floating loosely in the fluid; in fact, these air bubbles are common to all fluids, and are generally large enough to be seen without microscopic aid. Those, however, which are in the fluids of the eye, are not of the hundredth part of their size; for though these bubbles in the aqueous humor appear of the ordinary diameter, yet this is owing to their being highly magnified. In the aqueous chamber they float about either in isolated bubbles, or are connected together like strings of beads. When they move about singly they are perfectly transparent, and thickly as they are diffused throughout, offer no obstruction to perfect vision. Every eye, whether young or old, healthy or diseased, is full of them; and the length, and tortuous, ever varying shape of these strings of air beads, would make us apprehensive of evil to the eye did we not recollect that they are merely globules of air and powerfully magnified. In sailing on the river when the reflection from the sky and water is very strong, these air bubbles are frequently seen floating about in the air, and apparently at a great distance from us. They are seen likewise on the rim of silver and gold spectacles, only that they then appear horizontally elongated, which elongation is discussed amply in the chapter on Halos.

34. The third kind of floating air bubbles—and the most important as it regards vision—are those denominated *muscæ volitantes*. They occupy the fluid called the liquor Morgagni; which fluid surrounds the crystalline lens, and is collected within its capsule. It is of a denser and more gelatinous nature than that which is in the aqueous chamber, though its solvent power is less; at least, it has not the power of solving the morbid viscidity which sometimes appears in the secretion. The air bubbles, therefore, are often found adhering together in bunches, and held in this state by the superabundance of viscid gluten which the sluggishness of the excretory ducts or absorbents suffer to accumulate in the liquor Morgagni.

35. When attention is directed to the phenomenon, it is surprising to find how many eyes are affected by these muscæ volitantes; some persons having them in such great abundance as to interfere with vision. Amaurotic eyes, I *now* know, are not always troubled with them; of course, they are neither the cause nor the consequence of amaurosis; they arise simply, as I stated, from debility in the absorbents, and of course the gluten is not disposed of as rapidly as is necessary. The presence of the Morgagni air bubbles would be of no more injury to vision than those which exist in the other humors, were it not that they cling together in

bunches. When single, or even when united like strings of beads, they do not obstruct the rays of light, because their axes are independent of each other. But when they cling together in bunches, their axes interfere, and do not allow the rays of light to pass through them, consequently they present as great an obstruction as any other opaque mass. *It is simply, therefore, through the want of parallelism in the axes of the Morgagni air bubbles that the spectra called muscæ volitantes disturb our vision.*

REVIEW DEPARTMENT.

ON LITHOTOMY AND LITHOTRITY.

BY EDWIN LEE, ESQ.

[Mr. Lee has published an excellent paper on this subject in the Edinburgh Medical and Surgical Journal, for which the Jacksonian Prize of 1838 was awarded; and some practical remarks from this paper we will lay before our readers. On the comparative value of the bilateral and lateral operations for stone, he says:—]

The lateral operation, which is the one almost invariably performed in this country, is superseded in France in some cases by the bilateral operation, which has not, I believe, been performed in England, and of which, as it is less generally known, it may not be out of place to say a few words. Chaussier first conceived the idea of avoiding the consequences which result from an extensive incision or laceration of the cellular tissue around the neck of the bladder, frequently attendant upon the extraction of calculi by the lateral operations, by incising both sides of the neck of the bladder, so as to admit the extraction of stones, even of larger size, without the incision extending beyond the limits of the prostate gland, or, at all events, without extensive lesion of the surrounding cellular texture. Beclard also acted upon this idea, and performed the bilateral operation several times; but it is to Dupuytren that its introduction into practice was principally owing. This celebrated surgeon preferred it almost exclusively during the latter years of his life; and in consequence of the successful results which he was stated to have obtained, it was pretty generally adopted by many French surgeons. This operation is in fact a modification of Celsus' method of cutting upon the gripe, but, instead of the operator introducing his fingers into the rectum to fix the stone, a staff very much curved and deeply grooved is passed into the bladder; a semi-circular incision is then made through the perineum, commencing midway between the tuberosity of the ischium and the anus at the right side, circumscribing this aperture, and passing an inch anterior to it, to terminate at the corresponding point on the left side; the membranous part of the urethra is then divided longitudinally, and the double-bladed *bistourie caché* is introduced along the groove of the staff into the bladder, its concave surface being directed towards the pubes; when within the bladder, the bistoury is turned round so as to make its concavity front the rectum; the blades then being pressed out (to the extent previously regulated by a scale at the handle varying from six to twenty lines,) and the instrument being withdrawn, an incision is made in the neck of the bladder and prostate, of a form corresponding to that of the integuments.

The chief advantages of this operation are, that it is better adapted to the easy extraction of large calculi, especially in cases of deep perineum, than is the lateral operation; a way being made for the passage of the stone at the widest part of the inferior aperture of the pelvis; and, as the incision at the neck of the bladder would not, in most cases, extend beyond the circumference of the prostate, the risk of urinary infiltration is much diminished. It exposes less than the lateral operation to the danger of wounding important arterial branches, though in the bilateral as in the lateral operation, considerable bleeding may ensue from the division of the veins about the neck of the bladder, especially in old persons; and this is, perhaps, more likely to occur by the former than the latter method, as they would be divided to a greater extent. On the other hand, there is perhaps more likelihood in this than in the lateral operation, of the rectum being wounded, as this part, particularly in old people, is often considerably dilated. This accident may, however, generally be prevented by the previous exhibition of an enema, and by the operator's depressing the bowel with the forefinger of his left hand, while making the incision; but, even should it be cut, the wound would probably heal in most instances without trouble.

Some English surgeons, among whom is Mr. Liston, recommend, when the stone is of large size, that the incisions through the integument and cellular texture should be made the same as in the lateral operation; and, if the incision of the neck of the bladder on the same side be found insufficient to allow the extraction of the stone, then to incise the prostate on the opposite side; thus combining the bilateral with the lateral operation. Where, however, the former appears to be indicated, I should conceive it would be better to perform it in preference to the above method, in which the outward wound being on one side, the traction in the removal of the stone must necessarily be made in that direction, and when a large stone is in the grasp of the forceps, would be more likely to occasion injury and laceration of the parts, than when the direction of the outward incision corresponded with that at the neck of the bladder. Besides, the majority of operators having once seized the stone, would not stop to make the second incision of the prostate, but would continue their attempts to extract it, and thus risk injuring the parts by the employment of an undue degree of force. In several trials which I have made on the dead body, and also in the demonstrations of this operation which I gave in England, the blades of the bistoury were expanded to the extent of from fourteen to eighteen lines, which admitted of the extraction of large stones from the bladder, and subsequent examination of the parts showed that the incisions had not extended beyond the limits of the prostate.

[It is, however, well known, that the success which has generally been attributed to the bilateral operation is not to be depended upon, owing to the erroneous reports which have been published respecting it, and more especially in France. The account of it in the *Dictionnaire de Médicine et Chirurgie* differs materially from those given by M. Civiale.]

The lateral operation may then be considered as the one most applicable to the great majority of cases where lithotomy is required, and must be regarded in a very different light according to the circumstances under which it is performed; both with respect to facility of execution, and as to its ultimate results. In favorable cases, and particularly in young subjects, the operation is generally terminated in a few minutes, not unfrequently in one or two minutes, and the patient is at once relieved of a disease, which, if left to itself, would occasion months or years of suffering, and cease only with his existence. After the operation, the wound in the bladder being at its lower part, the urine passes away readily; the contractile power of the organ is not materially impaired; there is comparatively little risk of the urinary infiltration or the peritoneal inflammation, to which the hypogastric operation so frequently exposes; and in by far the greatest number of instances, the patient advances towards recovery without impediment. Notwithstanding these circumstances, however, the operation must always be regarded as one of the most painful and dangerous in surgery.

[When we remember that only a few years ago the operation of Lithotrity was but little practised in this country—so little so, that Mr. Crosse, in his standard work on urinary calculi, says, speaking of the different instruments, 'they are scarcely employed by any, save those who dedicate their time and attention almost exclusively to the undertaking,' we cannot but be astonished at the rapid advances which have been made in this branch of surgery within the last five years. It is curious to observe the different improvements which have been made in the various instruments for this operation. It would be of little use here to enumerate them, or to go into detail respecting their merits. This has already been ably done by different writers. They may be ranked under four heads: '1st. Those with which the stone is first perforated with a view to diminish its force of cohesion, and then crushed. 2d. Instruments for breaking calculi by means of percussion. 3d. Those for effecting the same purpose by pressure. 4th. Instruments, by means of which, percussion may be combined with pressure.']

The instruments with which pressure may be combined with percussion are most usually employed at the present day, and are so perfectly constructed as to render their use much more easy and safe, in all the cases to which lithotrity is adapted. In form they resemble Heurteloup's percussor, of which they may be considered a modification; and though their diameter need not exceed that of a large-sized bougie, they are made sufficiently strong to break the hardest urinary calculi. The concave branch slides freely within the convex one; and thus admits of the employment of percussion, while by the addition of a screw at the handle, (acting by a fly in Weiss's, and by turning a button in Charriere's instruments,) pressure may be applied. The teeth are small in these instruments, and are close together; the extremities of the branches are therefore as strong at one point as at another; the force employed telling in great measure on the curve and straight part of the instrument. An important improvement has been effected within the last three or four years by Mr. Weiss, at the suggestion of Mr. Oldham, by which a serious inconvenience formerly attending the use of these instruments is obviated. This consists of an opening being made in the curved portion of the convex branch, which, without weakening the instrument, allows of the detritus being pressed through, as the stone is crushed, instead of becoming collected between and clogging the branches,—thus impeding their closure, and the consequent withdrawal of the instrument, which not unfrequently occurred before this improvement was made. In the curved instrument, however, used by M. Civiale, there is no aperture for the passage of the detritus, which is prevented from collecting between the branches, by a few gentle taps being struck with a hammer on the extremity of the concave branch after the stone has been crushed by pressure. After every two or three blows, M. Civiale separates the branches a little with the thumb of his left hand while holding the instrument, in order to allow the detritus to fall out; and in several operations which I have seen him perform, there has not been any difficulty in withdrawing it, though this would be very likely to happen in less practised hands. The extremity of the branches of this instrument is of a much more flattened form than those in general use, which M. Civiale considers more advantageous, as a larger surface of the stone is embraced, and the fragments resulting from its fracture are less angular.

After a stone has been broken by one of the preceding methods, a greater difficulty is generally experienced in dealing with the fragments, each portion having to be seized, and broken sufficiently small to enable it to pass away through the urethra. In order to obviate this inconvenience, Mr. Key very ingeniously caused to be added to the ordinary kind of lithotrite, a small net, which, when the instrument is open, is expanded by means of lateral wires. The net thus catches the larger fragments after the stone is crushed, instead of allowing them to fall into the bladder, and, being contracted by drawing the wires, replaces them within the grasp of the instrument, to be broken into small portions at one sitting. Though this apparatus has been successfully used by Mr. Key, it is of too complicated a nature, and too likely to become deranged, and thus cause irremediable injury, even to come into more general use. Even were it not exposed to these objections, it has, moreover, the great disadvantage of not allowing the surgeon to discontinue the operation, before the whole of the fragments are broken into pieces sufficiently small to pass through the meshes of the net, whatever be the state of the patient or the irritability of the parts; and it is well known by those who have paid most attention to the subject, that many of the accidents and dangers attendant upon lithotrity are attributable to the sittings being so much prolonged, when the surgeon has been anxious to terminate the operation in one or two sittings.

There is in general no difficulty in seizing a stone in the bladder with the two-branched lithotrite, after a few trials have been made on the dead body. The pelvis having been raised by pillows placed beneath it, and the bladder moderately distended by the injection of tepid water, the lithotrite should be introduced and the stone felt for with its convex surface as in common sounding. By raising the handle, and consequently depressing the curved portion of the instrument to the floor of the bladder, the stone will generally be pushed a little on one side. The lithotrite being then held steadily with the left hand, its concave branch should be drawn back with the right, and as the resistance is withdrawn, the stone, tending to revert to the medial line, will probably fall within the expanded branches. When the curved portion is not sufficiently depressed, though the stone be plainly felt, the attempt to seize it may fail, in consequence of the instrument being opened above it, as I have seen happen in several instances. If the stone should not fall within the branches, and is felt to lie on one side, it may generally be seized by rotating the beak of the instrument towards it, and even when lying behind an enlarged prostate, a stone may frequently be taken up by this means. As the shortness of the curve in these instruments admits of their being turned completely round, with but little pain or inconvenience, on the concave surface being presented downwards, and the inner branch being drawn back so as to open the instrument, the prostate is slightly advanced with it, thus very much facilitating the taking up of calculi, which would otherwise escape detection. When the stone is felt to be between the branches, it should be held firmly by the thumb of the operators' left hand pressing on the expanded portion of the handle, if percussion is to be employed, or by turning the fly or button when pressure is preferred; the screw being then tightened till the stone is broken, or, if much force be requisite, and the assistance of percussion be deemed advisable, the screw may be removed by turning the knobs of the button in one of Charriere's instruments transversely, and a few sharp blows struck with a hammer on the extremity of the instrument. When the stone is broken or is felt to have yielded, the screw may be again applied, and the branches of the instrument brought into contact with each other. In most cases, however, percussion may be dispensed with altogether, and in many a very slight degree of pressure by means of the screw suffices to reduce the stone to fragments. This method is considered by most unprejudiced persons conversant with the subject, as infinitely preferable to percussion, as it is not so formidable an operation; is less abrupt in its action; does not require the assistance of a second person; is attended with less risk of injury to the parts, and breaks many calculi by gradually crumbling them down to a coarse powder or to small fragments, instead of at once dividing them into two or three larger portions, as mostly happens by percussion, which should be especially avoided when the bladder is much contracted, or where there is great irritability of the parts; but where the stone is hard and brittle, not yielding readily to pressure, percussion may be advantageously called in to its aid, and will in some cases very much facilitate the operation. When the stone is once broken, its fragments may generally be reduced to smaller portions by pressure alone; for which purpose it is frequently not even necessary to employ the screw, pushing the end of the branches against each other with the hand being sufficient. For this part of the operation, as also for crushing small stones, the screw scoop and catheter forceps constructed by Weiss, may often supersede the employment of the lithotrite. These instruments are also well calculated to remove small fragments or detritus lodged behind the prostate. Injections of the bladder, either through the last named instrument, or through a large silver catheter, constructed for the purpose, the eyes of which are of considerable diameter, will also very much facilitate the expulsion of detritus.—*Edinburgh Med. and Surg. Jour.*

[Both these operations have had their particular advocates. Mr. Lee, we think, very ably discusses the merits of each, and the circumstances under which the one or the other ought to be preferred. Where the operator cannot decide on the preference of one to the other in any individual case, it will clearly be his duty to give the preference to lithotrity, as the other can be performed afterwards, in case of this milder operation failing to cure.]

Lithotrity may be considered as more especially suited to adults whose general health is good, and whose urinary organs are free from any other disease than the presence of stone; in whom the bladder is moderately capacious, not preternaturally irritable, and contains a single stone of small size, (as not exceeding the size of a filbert,) and not excessively hard. A patient in whom these conditions are met with may be regarded as being under the most favorable circumstances for the operation, which in all probability would require but few sittings for its completion, without the occurrence of any of the more serious accidents which sometimes attend it. Nor are the instances in which all these propitious circumstances are united at all unfrequent; a large proportion of stone patients who apply to the surgeon for relief, have, in fact, no disease but the stone, the presence of which is frequently not even manifested by the symptoms, but only becomes evident on sounding. It is true that a person under similar conditions is also in a very favorable state to undergo lithotomy, and would most probably recover; yet it must be borne in mind that, even in the most favorable cases, the mortality from lithotomy is great; that it is an operation of a most painful nature, and one of which patients entertain so great an apprehension, as not unfrequently to have a prejudicial effect on the result; that unexpected difficulties may arise during the operation, and accidents may supervene, compromising the patient's life; and that, even if every thing were to go on well, the patient must still be almost entirely confined to his bed, till the complete healing of the wound. Few surgeons, therefore, conversant with both operations, would hesitate in a similar case to recommend lithotrity; and even were the surgeon disposed to prefer lithotomy, many patients would decline adopting his recommendation, and would very likely apply to others whom they might think better able to cure them, without subjecting them to so formidable an operation.

Adults and elderly people, in other respects in the same conditions as those above specified, but in whom the stone is of larger size, as of a walnut, or from ten to fifteen lines in diameter, may also be considered in a favorable state to undergo lithotrity, though, of course, less so than when the stone is of smaller size. If instead of one moderate sized stone, the bladder contain two or three small ones, the patient is not in a unfavorable state, as he would be no worse than if he originally had a larger stone, which, after a sitting or two of lithotrity, had been broken into as many portions. Even when the bladder contains several stones, lithotrity may still be applied, if there be no other counter-indicating circumstances, and the stones be of small size, though, if there was reason to believe they were numerous, lithotomy would perhaps be the preferable operation, on account of the length of treatment required by lithotrity, and the existence of so many causes of irritation, superadded to that of the frequent introduction and manœuvring of instruments. Here, however, the degree of irritability of the parts and other circumstances must be taken into the account to guide the surgeon in his choice, as, though he may be aware that the bladder contains more than one stone, he cannot always be as certain that it contains several. In these cases, also, the tendency to the re-formation of calculi must not be lost sight of. This, indeed, would be one reason for preferring lithotrity, if other circumstances were not unfavorable to its employment, as a patient in whom this predisposition is strongly manifested would, even after lithotomy, very likely require another operation ere long, and this could not, like lithotrity, be repeated several times in the same person.

Lithotrity has been objected to in these as also in the simpler cases where the bladder only contains one stone, on the grounds that one or more of the calculi or fragments are liable to be left behind, after the operation is terminated. This, it is true, has occurred in several instances, and in some patients who were supposed to have been cured, but who afterwards died of the disease, an examination of the parts has exhibited the formation of fresh calculous depositions around the fragments of calculi which had been broken by lithotrity. Where also the sittings of lithotrity are obliged to be suspended for any length of time, the fragments very often become covered with a fresh coating of the phosphates. One of the first patients lithotritised at the Hôtel Dieu, a short time after he had been dismissed as cured, returned as ill as before, though when he left the hospital he had none of the symptoms of stone, nor could any remains of the foreign body be detected on sounding. This accident, though more likely to happen, is not peculiar to lithotrity, but may also occur after lithotomy, where the bladder contains several calculi, or where a stone is broken in attempting to extract it. When, however, after proper explorations of the bladder, no more calculi or fragments can be felt, it is fair to conclude that none exist. Even should any escape detection by being lodged in a fold of the bladder or otherwise, lithotrity should not bear the blame, as it can only attack what is tangible, and in many of the cases, where a calculus is again felt in the bladder some time after the performance of lithotomy or lithotrity, and the patient was considered to be cured, it is just as likely, or more so, to be the result of a subsequent descent from the kidneys, particularly when there have been several calculi, which indicates the great predisposition to their formation.

When the stone is of considerable hardness, but of small size, lithotrity is applicable with great prospect of success, and, if there be no counter-indicating circumstances, should generally be preferred to lithotomy. The hardness of the stone, if it be small, need not, as formerly, prevent the performance of the operation, which will, in these cases, often be facilitated by the assistance of percussion, though the present improved instruments are able to break, by means of the screw, the hardest urinary calculi, without the danger of their giving way. When, however, there is reason to believe that the stone is of larger size, as above twelve or fifteen lines in diameter, and that it is at the same time of great density, lithotrity would be attended with much more risk, and lithotomy would, in most cases, be the preferable method, especially if the symptoms of the disease be severe, and there exist much irritability of the bladder, on the passage of instruments. The hardness of a stone, though very unfavorable for lithotrity, is not so for lithotomy, but rather the reverse, as, when once the bladder is opened, it would be more easily extracted than a softer one, which might break by the pressure of the forceps, and would necessitate their more frequent introduction, with the risk of a portion being left in the bladder.

In proportion to the increased size of the stone beyond a certain point, as from twelve to fifteen lines in diameter, (due regard being always paid in estimating the circumstance to the relative capacity and irritability of the bladder,) the case is more unfavorable for lithotrity, which is altogether unsuitable to very large calculi. In some cases, however, of large calculi (as of the size of a hen's egg) chiefly composed of the phosphates, and consequently more friable, lithotrity might still be preferred to lithotomy, which, in these cases, is not unfrequently counter-indicated; or its performance is attended with the greatest risk, on account of the diseased state of the urinary or other organs; consequently lithotrity, though performed under very disadvantageous circumstances, would afford the best chance of relieving the patient of his disease, and should be had recourse to, if the condition of the patient admitted of its application, with a likehood of success.

The smaller, therefore, and the more friable the stone—other circumstances being the same—the more favorable is the condition of the patient for lithotrity. Some calculi are so soft as to break on the slightest touch, or fall to pieces spontaneously, forming a sort of mortar in the bladder. For these the lithotrite need not be used, as they would be better removed by the scoop catheter and injections of the bladder.

[The preceding observations chiefly respect the nature of the stone to be extracted, but even still more important circumstances are to be well considered before having recourse to either lithotomy or lithotrity. The condition of the parts in question are to be carefully examined. In the first place a *narrow urethra* must always be an obstacle to lithotrity, although the recent improvements in the instruments used may, in some measure, obviate this difficulty. A contracted urethra will not only prevent the proper instruments being easily managed, but also will prevent the ready escape of the fragments afterwards. The same may be said when *stricture* is the cause of the contraction; although this may generally be remedied after the operation. 'When co-existing with stricture, other states unfavorable for lithotrity are met with, as a largish or hard stone, a contracted or diseased state of the bladder, great irritability on the passage of instruments, or enlargement of the prostate, lithotomy would in most cases be preferable, and, if successful, would at once relieve the patient of his stone, and at the same time of his stricture.' When the urethra is more closely bound up to the symphysis pubis than usual, the curve is much increased, and of course will prevent the free use of instruments which are inflexible and comparatively straight: for even the curved instrument which is now often used, does not remedy this difficulty, the curved part being exceedingly short, and entirely within the bladder during the operation. 'Enlargement of the prostate, especially of its middle lobe, is also a common cause of increased curvature of the urethra, and may exist to such an extent as to render lithotrity impracticable with safety.' At the same time an enlarged prostate is equally a cause of danger in lithotomy, not only from the increased depth of parts between the skin and bladder to be cut through, and from the incision being made through a part morbidly altered, but also from the enlargement being so frequently complicated, especially in old people, with disease in other parts.

'*A contracted and thickened bladder*, is also a very unfavorable complication.' In this case both lithotomy and lithotrity would be dangerous. When the symptoms are very urgent, and the bladder in a high state of irritability, lithotrity would greatly add to the evil, and ought not to be performed unless the advantages preponderate in other ways, such as the stone being small and soft, in which case the sittings ought to be short, and sufficient time ought to intervene between each operation. It frequently happens, however, that the irritability of the bladder diminishes instead of increasing, by a repetition of the operation, the bladder becoming more accustomed to the irritation. If to this state of irritability of the bladder there be added a state of subacute inflammation, lithotomy would be inadmissible, and if the patient *must* be relieved of the the stone, lithotomy would be the preferable operation, and especially if the state of inflammation were kept up by the stone: and if the inflammation were decidedly of a *chronic* character, unaccompanied by much pain or irritability of the bladder, but attended with a copious secretion of ropy mucus, although an unfavorable complication, lithotrity would be preferable to lithotomy, as the stone in these cases is generally composed of the phosphates, and is soft and easily reduced to fragments.

Sometimes atony, or even paralysis of the bladder exists in old people, and has been advanced as an objection to lithotrity, on account of the patient not being able, after the operation, to empty his bladder and get rid of the fragments; and, moreover, in these cases, the stone often arrives at a considerable magnitude before it causes great irritation. In such a case, if the stone is supposed to be of considerable size, and the prostate gland enlarged, lithotomy would be preferable: where, however, the atony of the bladder is not complete, lithotrity would often be preferable to lithotomy, always taking care to regulate the sittings by the circumstances of the case, and to bear in mind, that the bladder, by not being particularly irritable, is not that safe monitor to the operator which it is in other cases. Abscess, ulceration, or fungous growths of the bladder, as evidenced by the passage of blood, pus, &c., would of course render any operation inadmissible; unless we had good reason to suppose the blood or pus to come from one of the kidneys, the prostate, the perineum, or the surface of the urethra.

If organic disease exist in any other part of the body, it would render any serious operation unfavorable, especially that of lithotomy,—in these cases lithotrity would be of service.

The preceding observations apply chiefly to adult males or those above puberty, but a great many cases of stone occur in children below ten or twelve years. In these cases lithotrity is not advisable, on account of the narrowness of the urethra, and the length of time which would be occupied in the treatment; the fragments being required to be broken down more completely than in the adult, whose urethra is wider. Other serious objections likewise exist, as the great susceptibility of the nervous system and irritability of the parts. In young children, therefore, lithotomy is generally preferred for a variety of reasons. Mr. Lee ends his truly admirable paper by the following conclusions:—]

1stly, That lithotomy is still, in the present state of the art, the operation most suited to the majority of cases of stone in the bladder; inasmuch as about one-half of the number of stone patients, consist of children to whom, with a few exceptions, it is more particularly adapted.

2dly, That, as far as adults and elderly persons are concerned, lithotrity is most applicable to an equal, if not to the greater, number of cases.

3dly, Lithotrity is preferable in the great majority of female cases.

4thly, Other circumstances being favorable, lithotrity is more especially suited to calculi of small size, even when hard.

5thly, Lithotrity is less applicable than lithotomy to most cases, where the bladder contains several calculi, especially if they be hard.

6thly, Lithotomy is the preferable, and often the only admissible operation, in cases of large calculi; as also in those cases where the stone, though only of moderate size, is yet of considerable density, and irregular on its surface, as in the oxalate of lime variety.

7thly, Where there exists much irritability of the urethra and bladder, which cannot be allayed by preparatory treatment, lithotomy would be the preferable operation; especially if the irritability appeared to be chiefly dependent upon the presence of the stone.

8thly, Lithotrity is applicable in some cases of deranged health, or disease of parts, which would counter-indicate lithotomy, or would render its performance most likely to be attended with failure.

9thly, The degree of pain from the performance of lithotrity is not great in many cases, and is mostly diminished after the first sitting; but, on the other hand, in some instances, the operation is very painful, and the pain becomes increased in subsequent sittings, though, perhaps, never so acute in lithotrity as in lithotomy, yet, as the pain in the latter operation lasts only for a few minutes, whereas in the former it recurs, though less in degree, on each sitting, the patient frequently suffers by lithotrity a greater amount of pain.

10thly, The duration of the treatment is generally longer by lithotrity than by lithotomy, though sometimes it is shorter; and after the stone has been removed by the latter operation, the patient, though confined to his bed, may, during the greatest part of the period, be considered as convalescent; whereas, when lithotrity is performed, there is always risk, so long as any fragments remain in the bladder, of circumstances arising to prevent the completion of the operation, and the patient cannot be regarded as out of danger.

11thly, When lithotrity is applicable, the method by pressure is, in the great majority of cases, infinitely superior to that by percussion.

12thly, Lithotrity exposes more to the risk of a relapse than lithotomy, on account of the greater probability of a portion of stone having escaped detection, and remaining in the bladder after the operation.

Lastly, sufficient data do not as yet exist whereon to form any accurate estimate of the average amount of failure, and mortality after lithotrity; the accounts hitherto furnished being of a very contradictory nature; some representing lithotrity as more successful in its results than many slight operations; others stating the number of failures to be very great. The circumstance of several unsuccessful cases which were not adverted to by the operators, have been subsequently brought to light, both in England and on the continent, tends very much to discredit some of the statements of success which have been made; though, as far as the results are concerned, much must depend upon the operators being accustomed to the use of the instrument, and knowing when to desist from persevering in the attempts; as also upon the selection of proper cases. It is, however, satisfactory to know, that, since the instruments have become more simple and perfect in their construction, and the operation better understood by the generality of practitioners, the proportion of failures is much less than at an earlier period.—*Ibid.*

GLEANINGS FROM THE FOREIGN JOURNALS.

On the Subcutaneous Ligature of Arteries.

BY F. L. TAVIGNOT.

[This operation has never been performed on the living human subject, but M. Tavignot has frequently performed it successfully on the lower animals, and on the dead body. We dont see how it can with any safety be performed, on account of the impossibility of avoiding including the surrounding textures, and especially the nerve and veins accompanying the artery. But M. Tavignot asserts that these textures may be included without danger. From this, however, we beg leave to dissent.]

For the performance of the operation, two sharp needles, each armed with a double ligature of silk or gut, are required. One of these, the one intended to pass under the artery ought to be larger than the other, as it has necessarily a larger space to traverse. The shorter needle is first to be passed in front of the artery, and withdrawn, leaving the ligature. We then introduce the larger needle at the orifice by which the former issued, and pass it under the artery, bringing it out at the point of entrance of the first. This needle being also withdrawn, we now have in each orifice the loop of one ligature and the two ends of the other. The ends being placed through the loop, are to be drawn tight, and care taken to ascertain, by the absence of pulsation, that the artery is actually included in the ligatures. Such being the case, permanent constriction is effected, by attaching the ends of each ligature to the branches of an instrument, in a horse-shoe form, which he recommends for that purpose. Thus the operation will be completed in a few seconds. In case of circumstances arising which may render it necessary to loosen the ligatures, it is as well to pass a piece of silk of a different color through the loop of the superficial one; by pulling upon this we can at pleasure withdraw the ligature and remove the constriction.—*Lon. and Edin. Month. Jour. of Med. Science.*

Use of Alum in the Treatment of Stricture of the Urethra.

BY M. JOBERT.

[M. Jobert regards alum as possessing many advantages in the treatment of this disease. He uses it as follows:—]

A bougie is selected, the finer at the extremity the narrower the stricture. By placing its extremity for a moment in a candle, it is so far softened, that on immersing the instrument in pulverised alum, it adheres to the entire heated surface; the point is then rounded off between the fingers, so as to communicate to it a suitable shape. The bougie when thus armed, is passed into the stricture and left there for twenty minutes or an hour, according to the period of the treatment, the sensibility of the patient, &c. After a few minutes, a slight smarting is felt, but no other apparent effect is perceived. On withdrawing the bougie, a few drops of whitish mucus escape, which M. Jobert considers as tending to liberate the canal of the urethra. Not unfrequently on the day following the application, bougies of a considerable size can be passed into the bladder. M. Jobert also uses large bougies armed with alum, in the treatment of stricture of the urethra.—*Dublin Med. Press.*

Precautions to be Used in Detecting Kiestein.

BY H. LETHEBY, ESQ., A. L. S.

The urine should be procured at a time when the woman is as free from disease as possible; and I believe that passed early in the morning, after rest, gives the least variable indications. This should be exposed, in a tall narrow glass, to a continuous temperature of about 70° of F.; if a much lower temperature than this is used, say about 40°. I have known the urine to stand more than a fortnight without undergoing any change, although it be replete with kiestein or its principles, at a temperature of 70°. However, if the woman be pregnant, we shall observe, in two or three days, the first indication of its presence by the urine becoming turbid. In a day or two more a thin pellicle forms on its surface, and this gradually acquires consistence up to a fortnight from the onset of the experiment. But long before this time you will have noticed its characteristic odor; certainly not like cheese, to which Dr. Bird compares it, but precisely analogous to the smell of raw beef beginning to putrefy: it is emphatically a putrid smell. I have kept the urine more than a month after this, but it never loses either its pellicle or peculiar odor.

Besides the error likely to arise from the adoption of too low a temperature, where the kiestein would not be separated, I would warn the earlier experimenter not to fall into the opposite error of confounding the pellicle which forms upon all urine on standing, especially that which contains the lithates in excess; the more so as the general as well as microscopic appearance of this pellicle is often precisely like that of kiestein. The appearance I am now alluding to, however, is never accompanied with the putrid animal odor; but, on the contrary, gives out a copious smell of ammonia, and when disturbed falls immediately to the bottom of the liquid. These are the two especial distinctions.—*Lond. Med. Gaz.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, October 1, 1842.

We submitted to our readers, a few weeks since, the following plan of medical reform, which was drawn up by an esteemed correspondent:—

'1st. That the power of granting degrees be vested in a commission appointed by a State Medical Convention.

'2d. That the examiners be appointed in open convention, by *concours*, or some analogous test of qualification.

'3d. That the Convention be composed of delegates elected by the County Medical Societies, the representation to be governed by the number of members of each.

'4th. That the examiners shall not be teachers.

'5th. That all the examinations shall be public, or that the examination shall be recorded.

'6th. That if any other pre-requisite than qualification is necessary, the certificates of all legal practitioners be placed on the same footing.

'7th. That the examiners shall be paid by the State, and that the fees for graduation shall go into the State treasury.

'8th. That the corporate institutions already in existence shall not be allowed to grant a diploma, conferring the degree of doctor of medicine, unless the candidate shall have first passed the examination of the State commission, when each candidate shall, at his option, receive his degree directly from the State, or upon the evidence of the examiner's certificate, may take one from the college where he graduates. And,

'9th. That hereafter all legal qualification for practice shall be based upon a satisfactory examination passed before this State commission.'

We have been greatly gratified in finding that this comprehensive and judicious scheme has met with a very considerable degree of attention, not only from the profession, but the public press. The *New World*, one of our most ably conducted and influential journals, has a long and sensible article in its last number on this subject. Regarding it as of some importance to enable the profession to judge of the course which public opinion and the public press are taking on this great question, we have resolved to transfer to our columns the article to which we have just alluded.

'In order,' says the *New World*, 'that the public may understand the nature of the question at issue, we must first display medicine as it is, and as it should be; the evils which are now in existence, and the remedy for such evils. We have in this State, several incorporated colleges, to which belongs solely the right of teaching the science and the art of medicine. As they are all essentially the same, and are clothed with almost identical powers, one will serve as an illustration of the whole. A charter, then, is obtained from the State, empowering a body of men to appoint a set of professors, to whom, in connection with themselves, belongs the right of conferring the degree of Doctor of Medicine; and to this degree, in virtue of the vested power, belongs legal ability to practice. That this statement is true is evident from the fact, that every graduate from an incorporated institution, in this commonwealth, has only to register his diploma at the clerk's office, and present the document, with a certificate of registry before the county medical society; when, without additional evidence of qualification, he is admitted to practice.

'This college, then, being the sole source of legal power to practice, those who wish to enter the profession must do so on such terms as the school may name. The terms, generally, are these; the student must have studied medicine two or three years, with some legal practitioner, and have attended two courses of lectures, one of which must have been in the college where he presents himself for graduation; and, then, if he passes the test of examination, he is declared duly qualified for the doctorate.

'This arrangement, if it answered the end proposed, would—apart from the fact that it makes a monopoly of teaching—not be open to objection. But it does not secure the object which it was intended to effect; because, in the first place, the body which appoints the teachers being always composed, more or less, of men who do not belong to the profession, is inefficient to a proper choice; and, in the second, being irresponsible, except to public opinion, (the public hardly ever inquires into the matter,) there is no guarantee that other influences than the merits of candidates, will not be brought to bear in appointments. Now the lists of almost every board of trustees, show a minority of medical men in the number; and the notorious history of a great many appointments shows the agency of personal influence, in no way, or, at best, but slightly, connected with professional ability. True, efficient men are often appointed, but their selection is made more from the fact, that their names will add popularity and draw pupils to the school, than that they possess real merit. How much oftener is it said of a man, in view of connecting him with a school, that he has a fine reputation, than that he is a sound and able teacher? How much more is popularity in manner considered than correctness in doctrine? How often are men appointed to place whom their colleagues, and those who put them there, would not employ them in their families? And yet, such are the considerations which determine the choice of those who are to educate our young men for practice. Under such preceptors must be learned the principles of an art, the practice of which involves the life and happiness of every member of this community.

'In all our colleges, there are certain men who are but acknowledged incubi, and it is an eloquent commentary upon the management of such institutions, that these incubi are the men who have local interests and personal influence; men who have extensive connections, wealth, or some such advantage, on the spot where the college is located. They gather around them lecturers of acknowledged talent, and hope, by association, to share their fame. That such is the abuse of the appointing power, is a matter of the most common notoriety; and, as things are constituted, no legislative enactments can remedy the evil, unless such men can be placed on boards of trustees as are not open to the claims of cupidity, kin, or friendship.

'In the next place, the power of granting degrees—leaving out of view the fact, that its delegation from the State is an act of special legislation—is subject to abuse, or, at best, does not afford that protection to the public weal which it is designed to give. The proof of this is in every day's observation, and the brazen empiricism which laughs at legal restriction; for the degrees which are given, while they assume the force and authority of law, carry with them none of that moral influence, without which all law is inoperative. These degrees are useless, because they are not based upon qualification proved by a rigid test, and this is so, because the men who sit as judges of the student's proficiency are themselves his teachers. A professor is appointed to office without regard to his particular tenets, and he teaches a set of doctrines which are absurd, or behind the age; the pupils are obliged to take his tickets, and listen to his teachings, because he bases his estimate of their proficiency in his branch on the extent to which they have been indoctrinated by his peculiar views. They must repeat, on examination, his exploded doctrines, or absurdities, or, as a natural consequence, he declares them deficient in his branch. The necessary result of this is, that the time of their pupilage is spent in acquiring a species of knowledge which is to be used only in the green-room, or if carried beyond it, into the practice, gives to it neither efficiency nor dignity.

'Hence the young practitioner, when he comes to the application of the principles he has learned, finds that he must unlearn all he has been taught before, and begin anew, or carry with him guides in practice which every day's experience proves inefficient. Under such circumstances, what worth can be attached to the diploma itself, and what protection does it afford to the public! And yet this very system which does so little for the profession, or the public, sacrifices the interests of the many to the advantage of the few. We might be willing to submit, if the power derived from special privilege, in its exercise, produced a commensurate good; but when the utter disregard of social and political right, to say nothing of expediency, and that which is due to merit, and commanding talent, is followed by no advantage which might palliate, though it cannot justify the wrong; we, for one, do most solemnly protest against the evil. If it is necessary to grant the privilege of teaching only to a favored few, we must divorce the teaching and the legalizing power, and allow the popularity of schools to rest upon the soundness of the doctrines they inculcate, and the amount of practical knowledge they impart. If men will arrogate to themselves the high-priesthood in medicine, let them see to it that they meet the solemn responsibilities that the station imposes. Aggrandizing themselves at the expense of justice, let them beware how they trample on the best interests of humanity.'

We re-echo the warning with which this excellent and forcible article concludes, and again ask, will the profession themselves commence the work of reform, or will they doggedly wait till forced to it by the irresistible influence of public opinion?

The following very flattering notice of Dr. FORRY's standard work, on the Climate of the United States, appeared in a recent number of the *London Literary Gazette*:—

> 'This is an important subject, treated in a comprehensive, able, and scientific manner. * * Considering what few data existed previous to the author's labors, it is a most complete and satisfactory performance. It has further the advantage of being treated in a scientific manner, and up to the present state of knowledge upon the subject. * * The highest praise that we can award to this great labor—for so it may be truly designated—is, that our older country, with all its industrious intelligence, has nothing of the kind; most of the contributions in medical topography, that adorn the pages of the Transactions of the Provincial Medical Association, will not bear comparison; and it reflects altogether the highest credit on the medical literature of the United States.'

We have heretofore neglected noticing the 'Abdominal Supporters' and 'Improved Trusses for Hernia' invented by Dr. HULL, although we had often intended doing so. The numerous certificates of unequivocal approbation, however, which the instruments have received from the most distinguished sources, render our commendation of but small value. Still it affords us great pleasure to be able to corroborate, in the most unhesitating manner, the high encomiums which have been pronounced on the instruments, by members of the professson whose opinions are sure to command respectful attention. Our readers then, have only to consult the announcement which appears in our advertising pages, for proof of the utility and well-established reputation of Dr. HULL's inventions.

The residence of the Mr. Ross, to whom we alluded in our last week's number as the manufacturer of an excellent abdominal supporter, may be ascertained from his advertisement on our covers. He also offers most respectable references in his favor as a cupper and leecher, and we are happy particularly to notice that Mrs. R. applies leeches with great skill and neatness to the os uteri. We have also additional testimony to the judicious manner with which she performs the delicate operation of introducing the speculum, and we doubt not that the profession will be glad to avail themselves of her services.

The Surgical and Medical *Cliniques* at the College of Physicians and Surgeons, have been conducted during the summer with great and increasing interest. On Monday next the Fall Course of Lectures, which are delivered gratuitously, will be commenced.

Can any one furnish us with a full report of the operations on varicose veins recently performed at the New York Hospital? We have some good reasons for asking.

A new and very elegant operating theatre, capable of accommodating between three and four hundred spectators, has just been completed at our City Hospital.

We acknowledge the receipt of a beautiful bound volume of Hufeland's Manual of Practical Medicine, published by Mr. Radde, Broadway, and which we shall notice in our next.

THE MEDICO-CHIRURGICAL REPORTER.

Facts and Conjectures on the Trembles and Milk-Sickness.

In a letter from Dr. G. B. TAYLOR, *of Morganfield, Ky., to* Dr. W. L. SUTTON, *of Georgetown, in this State; communicated by the latter with some remarks.*

The subject of your letter is one on which I have made many inquiries, and in every neighborhood within my reach; and especially since the death of Wm. Hopgood, with whom you were well acquainted: he died at Highland about three years since. As he was a young man of close observation, and possessed more than common discrimination, I was disposed to place some confidence in his opinion of the producing cause of his disease; and I never saw a man more confident of any thing being the cause of his sickness, than he was that his was produced by mineral water, which he drank in the Highland hills, and at the very place where most of our cattle and horses have died. I did not see Hopgood until three or four days after his attack. When I visited him first, he was salivated, and his bowels had been freely acted on by oil, &c. He complained of feeling very tired, and although naturally neat, would not turn his head to spit, so as to avoid spitting on his bed. The action of the heart was so strong, that you could see the whole system shake at every pulsation. The pulse was slow and strong, not more than fifty strokes to the minute after I saw him; and I could count the strokes by putting my hand on the top of his head. I bled him freely three times, and he grew worse after each bleeding. He was disposed to faint when bled, and upon recovering from syncope, would vomit, and in a short time after, the pulse would be as strong as ever. I think he died upon the second day after I saw him. I have been in the habit of making inquiry of intelligent persons in the different neighborhoods, where they are liable to the disease; and I find the same mineral exists in every neighborhood—one in Union, two in Henderson, and three in Daviess counties. In all those places there are sweet springs, the water running from thin strata of stone coal, which contains so much sulphate of iron, that the smiths cannot use it without overhauling and throwing out the mineral. All those places are in the immediate neighborhood of sugar-tree hills, and I think an unusual growth of poison oak. I am satisfied myself that the disease is produced by the mineral, and that it contains a portion of arsenic. There is also some petroleum on the surface of the water at these sweet springs; the stock resort to them as *licks*, for want of salt. There is no country I have visited, that contained more poison oak, than that rich section in which you are situated, until it was destroyed by the stock. Horses and cattle feed on it with avidity, wherever it grows, and with impunity. I have just settled in the woods where the poison oak is very abundant. I have no stable as yet, and my riding horse has skinned every poison oak vine I can see, as high as he can reach. There have been several trees cut down with large vines on them, and he has peeled them the whole length, where he could get at them, and devoured all the small branches. I believe that females are not so liable to this disease during lactation, though not entirely exempt; as there was an instance at Leonard's, when he lived on the hill at Highland, of a cow and calf dying about the same time—the cow running in a stalk field, and the calf in a calf lot. There are two distinct vines called poison oak—the five-leaved and three-leaved. Both climb trees, and very much resemble each other. The poison kind has three leaves on the stem and puts out more radicles, attaches itself more firmly to the tree, and bears a small bunch of berries, very much resembling grapes, but smaller and blue. I have known of children eating them twice since I can recollect. It did not prove fatal in either of the cases; but both were very distressing, and neither of the subjects could see for a week or more. And they were certainly affected very differently from the cases of milk-sickness which have come under my observation. The poison oak will not poison all persons, which any farmer will tell you. Some can cut a green vine, and mark their shirts while on them, with impunity. I was confined near a month, when a boy, by doing so, and was as full of blisters all over my body, as ever any person was of pustules from small-pox. I have conversed with several persons who have had the milk-sickness, some at different times. They all say they feel tired constantly, and are incapable of taking much exercise, until they have been freely purged, which generally cures slight attacks. They consider calomel injurious. Those who have been hard at work about the time of attack, rarely recover. Senna, salts and jalap are considered among the best remedies. I think some of the preparations of iron would be good. Buzzards will not feed on the carcass unless compelled by hunger. I have noticed them sit upon trees around and watch the carcass until it rotted, without breaking the hide. But I have seen them, when they had been pressed by hunger, lying dead around the carcass. Some slowly expanded their wings, on my approach, as if about to fly, but, at the effort to rise, would tumble forward, unable to raise themselves. You know that we, at one time, had a fine pack of dogs. We frequently lost them by their eating carrion in the neighborhood of Highland. Some would come home with the appearance of being foundered, but were never fit for the chase afterwards, as they would take the 'tires,' as it is generally termed; and but few horses or oxen are of much use, after having the disease badly. Mr. A. Silver once lived at Highland, and said he could cure his cattle, if he saw them in time, by giving them enough of the decoction of white walnut to purge them. Peter Rives, at one time, was under the impression that arsenic would cure the distemper in his dogs, and was in the habit of giving it freely in that disease. Several were cured of distemper, but they were of no use in the chase, and appeared to be affected precisely in the same manner as those which had the 'tires' from eating cattle that had died from milk-sickness, which is my strongest reason for suspecting arsenic in the mineral. The disease produced by poison oak (so far as has come under my observation) differs so widely from milk-sickness, that I cannot attribute the disease to that vegetable.

Fall before last, we suffered very much for stock water, and several persons lost all the cattle they had. They died about these mineral springs in the hills at Highland, and the owners think they did not go into the bottoms. The people in the neighborhood of the disease, attribute it to something that grows in the rich sugar-tree hills exclusively; but we have the same kind of land and growth where there is no disease of the kind. I had forgotten to say that work oxen, regularly fed, are liable to the disease at the mouth of Highland. If the attack is slight, they will recover entirely by rest; if severe, they are worthless for the yoke afterwards. If the attack is slight, very hard labor will destroy the animal. Hogs and deer are not liable to the disease that I have ever heard of.

ADDITIONS BY DR. SUTTON.

In addition to the above, I will mention that since I commenced this letter, I have conversed with a very respectable lawyer, who has resided at Mill's Point, Ky., and at a place in Tennessee, where also the milk-sickness was common. He says, that in both neighborhoods, the people ascribed the origin of the complaint to the water; that the disease was much more common in dry seasons; and that, at such times, certain springs blamed with its production, acquired a taste which was not observable when the water was flush. He gave a number of facts, tending to confirm the general opinion, but which would swell this communication to an unwarrantable length. Upon the whole, they corresponded mainly with those held by Dr. Taylor. Again, I was informed by the widow of a Dr. Rainey, who resided somewhere not far from Covington, and who had a good deal of practice in the disease, that he had under his care a man and his wife, (perhaps both died, but of this I am not positive,) who had abstained entirely from milk and its products for a long time, for fear of the disease, in whom, nevertheless, it was well marked. Of course I can say nothing as to the accuracy of his observations, or the faithfulness of the report. The lady is quite intelligent, but there is a thousand notions upon the subject; and I cannot say than I am satisfied there is any such specific disease.

February, 1841. [*Western Journal.*

Remarkable Birth of Twins.

BY DR. SCHRODER.

On the 16th of November, I was sent for, to a robust healthy woman, who, three days before, had been delivered of a first child about 29 weeks old, in order to remove the after-birth. I very soon discovered that there was a second child in utero. The woman appeared to be vigorous; there had been no pain since the birth of the first child; there was no hæmorrhage; the bladder was not distended; the situation of the child was not high, the head presenting; and I saw no reason for forcing delivery. I visited the woman several times, to ascertain the progress. At last on the sixth day the second child was born, and immediately afterwards the after-birth came away, without any assistance. Both children are living. —*Vochenschrift fur dis ges. Heild.*

Treatment of Croup by frequently repeated Emetics.

BY DR. MAROTTE,

Formerly Interne of the Hospitals of Paris.

A paper on this subject by M. de Larroque, which appeared in the Bulletin Général de Thérapeutique for September, 1840, led the writer to resort to this mode of treatment. The emetic which he employed consisted of the tartrate of antimony in large and frequently repeated doses. He does not, however, attach so much importance to that preparation as to the emetic effect which follows the administration of many other medicines besides tartar emetic. The employment of local depletion, carried so far as to cause some faintness, has appeared to Dr. Marotte to be very beneficial, and to favor the subsequent operation of the emetic. Neither the dose of the medicine, nor times for its repetition can be regulated by any fixed rule; but the former may require to be increased and the latter to be rendered more frequent, according to the urgency of the symptoms. Vomiting should be kept up until a marked influence is produced on the cough and respiration, and must be repeated as often as the symptoms appear about to return. The fear of exciting gastritis Dr. Marotte treats as groundless; and details three cases in proof of the good results of the emetic plan of treatment, and its freedom from evil consequences.—*Gaz. Mèdicole.*

Effects of Immobility on the Articulations.

BY M. TEISSIER.

M. Malgaigne has shown in a very interesting treatise that any apparatus, which renders completely immobile the articulations of a fractured limb, brings on, more frequently than is supposed, an impossibility of moving these joints. He supposed that this is owing to the formation of false anchyloses. The writer of this article goes further, and states, that a true anchylosis often ensues. He brings forward three cases of anchylosis of the patella with the former, to which naturally there is no predisposition. 'It has been objected that these anchyloses may result from the inflammation produced by the fracture extending to the joint, and not simply by its immobility. But we have shown that they frequently occur in joints far removed, as in the ancle after fracture of the thigh. Anchylosis produced by fibro-cellular bands, has been often observed, here it is plainly owing to loss of motion.' Hence

1st. It is dangerous to imprison for several months, in an immoveable apparatus, the articulations of a fractured limb.

2d. That the joints should be left free to execute movements sufficient to induce the synovial exhalation.

3d. That we should commence gentle motion as soon as the callus is formed.—*Gozette Medicole.*

Vascularity of Tooth-bone.

We were shown a short time since, by Dr. Maynard, of Washington, a molar tooth, the bone of which, externally and internally, extending more than one-third the way through the parietes of its roots, was beautifully suffused with red. This circumstance conclusively establishes the doctrine that the investing as well as the lining membrane of a tooth, contributes to the vitality of tooth-bone. We hope to be able, in some future number, to present our readers with a drawing of it.—*Jour. of Dentol Science, for Sept.*

Ergot Producing Abortion in Cows.

In the neighborhood of Trois Croix there has this season been an epidemic of abortion among the cows, which has caused much consternation among the farmers. M. Bodin, director of the school of agriculture, has discovered that the grains of rye, and many other of the Gramineæ, contained a considerable quantity of ergot. This, he concludes, was the cause of the animals aborting. The observation merits attention, for it may be found that the ergot of all grains, as well as rye, produces the same effects. —*Jour. de Méd. et Chirurg.*

[We are not aware that any experiments have been made with the ergot of any of the Gramineæ excepting rye, which, if true, is surprising, as many other individuals of the family are subject to ergot. Phæbus enumerates thirty-one grasses liable to it. 'In the summer of 1838,' says Pereira, 'nearly all the grasses growing in Greenwich marshes were found ergotised. But the disease is not confined to the Gramineæ—the Cyperaceæ are also subject to it, and perhaps also the Palmaceæ.'—*Lond. and Edin. Month. Jour. of Med. Science.*

ITEMS AND INTELLIGENCE.

Medical Reform.

Thou thot preachest o man should not steal, Dost thou steal? Thou thot mokest thy boost of the law, through breoking the law, Dost thou dishonor it?

TO THE EDITOR OF THE LANCET.

SIR:—

I am not disposed to write a long moral lecture for the benefit of those whose interest will always prevent them from profiting by it; but I will call the attention of the reader to a curious anomaly in medicine, which would seem to show that laws were made for individuals and not for corporations. By the code of medical ethics published under the authority of the Medical Society of this State, it is held to be disreputable, and to savor of quackery, to magnify your own merits at the expense of your medical associates; and a physician who advertises himself, more than to designate his residence, is held to have lost caste, and as such is treated by the well-bred members of the profession. I am not about to argue the right or the wrong of this decision, for, after all is said, public opinion must settle the question; but I am disposed to insist that, the same rule should be made applicable to companies as well as to individuals: I am at loss to know why an individual should be treated as direlict in duty or propriety, for doing that, which our college corporations do at every returning season in their circulars. There seems to be a strife among our colleges, or teaching corporations, to forestall public patronage, each representing that it possesses facilities for the acquirement of a medical education, that cannot be *surpossed in this or any other country!*—that the professors are all men of great talents, great erudition, great energy, and great aptitude, and that the schools to which they are attached, are peculiarly deserving of public support. All this may be right, if teaching has been degraded to a trade; for it is only the seller appreciating his own wares, and inviting customers to his stall; but why is this mode of advertising allowable only to corporations? and why is the same conduct which would degrade an individual physician, commended and applauded, when put in practice by a corporation? Simply because the odium which should attach, is divided among some half dozen men, who are willing, each to bear his share, provided the advertisement will pay a profit! Now all this might be right, if teaching corporations were private schools, in which each man was obliged to depend upon his talents for his success, and the diploma or certificate of acquirement which the pupil, after due course of study, obtained, was merely an academic honor, and conferred no political right. But it assumes a very different character, when these certificates are made the legal evidences of medical acquirement, and confer a right to practice physic throughout this State, nothing more being necessary than placing them on file in a court of record. The teaching and the licensing powers being both exercised by the same persons, may in effect, and to our knowledge often does, render the plain provisions of the law, as applicable to all other pupils, nugatory. For example, the law requires of the pupil a term of study of four years with some authorised practitioner, before he can present himself for examination to a board of censors, if he wishes to stand upon acquirement;

unless he has had the advantage of a course of lectures delivered at one of the colleges in this State, in which case it may be reduced to three years; a course of lectures being considered tantamount to a whole year of study; and this is very reasonable, if the public could have the security that all the other legal requisites would be exacted. But that security they have not, and from the very nature of the case cannot have, while the licensing and the teaching powers are in the same hands.

The rivalries existing in our schools of medicine are rivalries of interest rather than of intellect, and hence it seems to have become necessary to invite pupils by extravagant advertisements, as discreditable to the teachers as they are disgraceful to the profession. The schools which graduate students with the most facility, will always be those most frequented; and when teaching becomes a trade, there is little room to hope that the practice of physic will not degenerate into one also. If the medical character is ever to be elevated to the rank which it of right should claim, the reformation must begin in the schools, and for this purpose every temptation to swerve from the right line of duty ought to be destroyed. The power to grant the license, ought to have no connection with the power to confer the degree of M. D. They should be considered simply in the character of academic honors, like the diplomas issued in our colleges of arts, and the separation could not fail to add to the value of both; as things are, each is in danger of being degraded by its alliance with the other, since the most open, unblushing frauds are constantly practised on the law of license even in its technical requisites. If the separation be not soon made, we may expect to find our schools of medicine underbidding each other in the prices of admission tickets, and promising not only to teach, but to graduate on more favorable terms than their rival institutions; the consequence of which would be that doctors would be made by the score or hundred, and sent abroad *without a mark*, as if the institutions which created them were ashamed of their own work. The multiplication of medical colleges in this country within the last fifteen years, has rendered this measure one of imperative necessity, and nothing short of a complete divorce of the teaching from the licensing power, in all the medical schools of this State, will give any promise of future amendment: all expedients heretofore tried, have failed for want of this essential provision.

Yours, &c.

James R. Manley.

On some of the most important Discoveries of Galen.

M. Dubois, in his reply to the letter of M. Double, applies himself chiefly to show with what truth Galen may be termed a localisateur—a term to which his correspondent had objected—by quotations from his works on a variety of subjects. He first alludes to the opinions of his author on the phenomena of the nervous system in health and in disease.

'Examine the most recent treatises on physiology, and observe what is there stated as to the brain being the organ of the intellectual manifestations; then consult the works of Galen, and say, if on this point all succeeding physiologists do not seem to have been eternally condemned to the labor of Penelope! When you have perused the enormous volume which Gall devoted to this very subject, you will probably be tempted to ask, before proceeding further, if some new Archigenes has not appeared to call in question all the facts recorded by him. At the same time do not forget to observe that in a dictionary, published only the other day, we are told that these facts have been demonstrated only within the last few years.

Archigenes himself, although professing a contrary opinion, showed by his practice that he had adopted Galen's view of the question. In the treatment of all mental diseases, he directed his remedies to relieve the brain—a contradiction which his opponent has tauntingly exposed in these words:—But oh, most illustrious Archigenes! you are surely not right in addressing yourself to the head, if, in these cases, it is the heart that is affected.'

M. Dubois shows that many other supposed discoveries of modern times were well known to the ancients. Praxagoras and Philotinus had suggested that the encephalon is only an expansion of the spinal marrow, and that the cranium is only an immense unfolded vertebra; an idea which Galen exposed as an ignorant absurdity.

Erasistratus had maintained that the number and size of the cerebral convolution are *en rapport* with the perfection and extent of his intellectual powers: Galen objected, that if this idea were correct, the brain of the ass should certainly have no convolutions at all;—a poor objection indeed, says M. Dubois; for the ass is by no means so stupid an animal; and Homer has not hesitated to compare one of his heroes, Ajax, to it, in consequence of his invincible tenacity and independence of character!

Galen, however, has shown much more discretion in discussing these subjects than many of the modern writers; for, on one occasion, he stops himself by saying that such discussions lead to questions too lofty and mysterious, but adds, with a natural grace, that it is difficult to avoid treating of the soul when engaged with the organ which is the seat of it. What a fine rebuke to the materialist of the present day is contained in the following passage:—

'If the principle of intelligence be a simple result of the structure of the brain, it would be essentially injured by any change in its texture; but if it be placed there, as we are in our dwellings, it does not necessarily follow that it should be injured by such physical changes. As, however, philosophers are not agreed on this question, and as they are unable to tell us whether the mind is an accident or result of matter, or whether it be merely associated with it, we should be satisfied with the simple announcement of the fact, that lesions of the encephalon generally induce disturbances of the mental powers.'

But to return to the subject of localisation, we should remember that Hippocrates himself has distinctly stated that, when one lateral half of the brain is injured or diseased, the affection is manifested on the opposite side. Aretæus is mere explicit in his description of this pathological fact, and gives an anatomical explication of it. Strange to say! this important truth became almost entirely forgotten; for we find that Pinel has not even alluded to it in his account of apoplexy, although in his report of Daubenton's last illness, he expressly mentions that the left side of his body was paralysed, and that nearly two ounces of blood were found on dissection in the right ventricle of the brain.

Now let us ask ourselves if modern discoveries have added anything of value to the proposition enounced by Hippocrates and Aretæus. Can we, with any degree of certainty predict the seat of the lesion, or say whether the brain itself or its meninges are affected in any particular case? All that we can do is to make some conjectures; and Galen had long ago showed how unsatisfactory and futile these usually are. 'We need not,' says he, 'trouble ourselves about trying to discover whether it is the brain or its coverings that are most affected; since, in either case, we know to what side of the head we should apply our remedies.'

So much for the encephalon; let us now turn our attention to the spinal marrow. It has been formally announced in our days, that the symptoms of a lesion of this organ are manifested on the affected side. What says Galen on this subject? 'You have seen that when our incisions, made transversely on the spinal marrow, extend to only one half of its thickness, the parts situated below the place of the incision were immediately paralysed, but only upon the side of the section; on the right, if the right half was cut, and *vice versa.*'

Galen was also well aware of the different effects of external violence or disease on the spinal marrow in different parts of its extent, and that the fatal consequences of the cervical portion being injured are attributable to the interruption of the breathing thereby induced.

It is really astonishing to observe the singular accuracy of the old physician's knowledge as to the functions of the nervous system, and the effects of injury or disease upon them. He had even, in some measure, foreseen that beautiful discovery of modern times, the distinction between the nerves of sensation and those of motion. He confessed that he was unable to solve the question:—'Grand problem!' he exclaimed, 'question full of difficulties and doubts! which Herophilus and Eudemas have left to posterity for solution!' And how many centuries passed before posterity ever applied themselves to solve the question, which had been *formulé* in so plain and distinct a manner by Galen.

If our space allowed, we might also allude to his clear-sighted views on the localisation of the intellectual powers in the anterior part of the cerebrum, while at the same time he avoided most of the errors into which the hasty curiosity of many modern physiologists has fallen, in their attempts to define the seat of each mental faculty. While he was aware that one faculty, as the memory for example, might be specially affected, he confessed his utter inability to arrive at any accuracy in his attempts to establish a local diagnosis of the seat of individual faculties. Whoever will carefully peruse the writings of Galen cannot fail to be struck with the singular sagacity of his views on the functions of the nervous system. Had they been better known by physiologists, and had the example of cautious deduction which he has set, been more generally followed, more progress might have been made in revealing some of its mysteries than has been by the mode adopted of late years.

M. Dubois closes his remarks with some allusions to that passage in Galen's life, which, if true, is but little creditable to his feelings of humanity and justice—his cowardly desertion of his post of duty when the plague broke out in Rome.

He has not, however, been without finding excusers of his alleged conduct on this occasion. M. Double benevolently doubted the truth of the charge; but M. Dubois seems satisfied that there are ample grounds for it, and attributes his unworthy behavior to the general demoralization then prevalent. 'The true motive,' says he, 'is, that in Roman society at that period the *moral sense* was nearly quite lost, more especially among the learned and affluent; for the regeneration, which Christianity was preparing, showed itself as yet only among the lowest classes of society.'

Galen was about thirty-four years of age when he arrived at Rome, where he soon acquired so high a reputation that his practice increased even beyond his wishes, *cum ægrorum curatio felicius quam optassem succederet.* He was probably rather a boastful loquacious gentleman, for he tells us himself that his *confreres*, who were probably jealous of his rising success, called him a *logiatre! moxque logiatron exclamarent.* He therefore resolved that from this time he should keep a rein upon his tongue, and never say more in consultation than what was absolutely necessary: *ut invidam istorum linguam declinarem, non, apud illos quos curabam, plus quam necesse erat profabar;* and he adds, *ne me plusphilosophi ac medici delusorem et vatem appellant.* He tells a capital anecdote of his 'savoir faire' in imposing on the credulity of some of his cotemporaries, who from his account seem to have rivalled in skill many of the *dispensing doctors* in the present day. We should suppose that he was a sly humorous rogue in his way, laughing in his sleeve at the ignorance of some of his confreres, and all the while keeping a sharp look-out at the main chance.

We extract the following report from his work De Locis Affect. libr. v. c. viii: it is really very amusing.

GALEN'S REPORT OF A CASE OF HEPATITIS.

Soon after my arrival at Rome, Glaucon, the philosopher, took a great fancy to me in consequence of my reputed skill in the diagnosis of diseases. Meeting me one day in his walk, he stopped to shake hands, and thus accosted me:—You are the very person I want; I have this moment left one of my friends, a medical man himself whom you may have seen with me the other day, very ill: suppose we go and call upon him.—Where does he live, and what's the matter with him? I said.—Glaucon, who is of a most frank disposition, replied: I have heard from Gargias and Appelles that you have on more occasions than one given such an accurate diagnosis, that it seemed more like the result of divine inspiration than of human knowledge; and I am glad of this opportunity of putting to the test this talent of yours, that I may satisfy myself whether you really have this marvellous faculty of presaging the most obscure questions.

By this time we had reached the door of his friend's house, so that I had not even a moment to tell him, as I have so often done to you, that, if in some cases we have one or more of those symptoms which leave no doubt as to the nature and issue of an exciting disease, in other cases they are so far from being satisfactory or unequivocal that we require a second or even a third examination of the patient before we can with any confidence pronounce our opinion.

As we entered the house, I observed in the first vestibule that a servant was carrying from the invalid's room a vessel containing a serous fluid, which appeared to be slightly sanguinolent and not unlike the washings of fresh meat.

This at once satisfied me that there was some affection of the liver;* but I made no sign in any way of what I had observed, and we at once proceeded to the patient's room.

The first thing I did was to feel his pulse, in order to determine whether the affection was of an inflammatory nature or not. As the patient was a medical man himself, he remarked that his pulse might have increased in frequency by the fatigue and exertion of getting up to stool; but I had already assured myself that his complaint was strictly inflammatory.

I observed at the same time on the sill of his window a pot which contained what seemed to be hysop mixed with honey and water; nothing more was required to show me that our gentleman thought that he was laboring under a pleurisy.

This idea was probably suggested by the sharp pain which he felt under the false ribs—a symptom, however, which is very common in inflammation of the liver also—by the cough, and his short hurried breathing.

Having thus learned all that was necessary, and profiting of the opportunity which luck put in my way of giving Glaucon a high idea of my skill, I placed my hand over the false ribs of the right side, and told the patient that *there* was the seat of the disease: he admitted that it was. Glaucon, who supposed that it was only from feeling the pulse that I made the discovery, was at once delighted and surprised.

---

* The ancients were in the habit of regarding the serous evacuations from the bowels at the commencement of dysentery and other intestinal affections as proceeding from the liver, and hence they gave the name of hepatorrhea to this symptom.

To increase his astonishment, I said to the patient, 'besides the pain in the right side, you are distressed every now and then with a troublesome dry cough, with little or no expectoration.'

While I was yet talking, he was seized with just such a fit of coughing as I had described. Glaucon could no longer conceal his surprise, and forthwith began to praise me to the skies.

Wait a little, I said to him; do not suppose that this is all that my art enables me to do. Then addressing myself to the patient, I continued,—do you not find the pain to be increased, and feel a sense of weight in the right hypochondrium, whenever you take in a deep inspiration? he at once replied that it was so, and seemed to be almost as much astonished at my prediction as Glaucon himself.

Seeing that fortune continued to smile on every thing that was done, it occurred to me to say something about the shoulder; for I was well aware that in most diseases of the liver there is a feeling of dragging down of the right shoulder. I had no sooner made the allusion than the patient at once confessed that it was just as I had predicted.

I will add only one other word more, I said; I will tell you what you have supposed was your disease. Glaucon exclaimed that he should not now be surprised to hear me divine even that too. The patient, astonished at my confidence, looked at me most steadfastly, awaiting with anxiety what I was about to say.

I told him that he believed that he was laboring under a pleurisy; he immediately answered that it was really so, at the same time expressing his profound veneration for my skill. His medical attendant also had formed the same opinion; for he had just ordered an oily fomentation to the side, such as is commonly used in this disease.

From this period, Glaucon formed the very highest opinion of my professional abilities, although hitherto he had always spoken slightingly of medicine and of physicians; but it must be confessed that he had probably never come in contact with any one of consummate skill.

I have detailed these particulars, adds Galen, in order that, if fortune throws in your way a favorable opportunity, you may know how to turn it to the best account; for it not unfrequently happens that we are placed in situations by which with good tact we may reach celebrity, although the greater number of men from ignorance cannot avail themselves of the chance.'

[A very good commentary on the well known lines—

There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.

Few men feel the truth of the maxim with greater force than many of our own profession.]

Artificial Teeth worn by Washington.

It is known to many that General Washington lost most of his natural teeth at an early age, and that for a number of years previous to his death he used artificial ones. The late Mr. John Greenwood, for a long time a distinguished dentist of New York, inserted, we believe, some two or three complete double sets for him. They were manufactured from the ivory of the tusk of the hippopotamus, almost the only material at that time employed for artificial teeth. We have half of a beautifully carved upper set, that were worn for several years in connection with a lower set, by General Washington, which were presented to us by Dr. Isaac I. Greenwood, son of the later Mr. John Greenwood, extensively known as an eminent practitioner of dental surgery of the city of New York. Mr. J. Greenwood's initials, which were engraved upon these teeth at the time of their fabrication, together with part of the date, filled with tartar or salivary calculus while they were worn, are now perfectly distinct. Although the art of the dentist has made rapid advances since the time when these teeth were inserted, their execution is superior to that of many manufactured at the present day. They were secured in the mouth by means of spiral springs. The other half of the upper, and the whole of the lower set, are in the possession of Dr. Isaac I. Greenwood.—*Amer. Jour. of Dental Science.*

TO THE EDITOR OF THE LANCET.

Mr. Editor:—

Will you be kind enough to say whether there is any school, in this city, for the study of *Practical Anatomy*, like Dr. McClintock's at Philadelphia. The terms of our 'Stuyvesant Faculty' are too high for many students, to wit: a proportion of $105, a matriculating ticket of $5, and a dissecting room ticket of $5. A number of persons no doubt would like to avail themselves of the opportunities afforded by such an institution as Dr. McC.'s, but cannot afford to humor the 'exclusives' with submitting to exhorbitant charges, for the acquisition of a science that should certainly be as free as our neighboring city affords it.

Have the 'Crosby-street Faculty' published their circular? An answer in this week's 'Lancet' will oblige

A Subscriber.

['A Subscriber' will find an answer to his query on the second page of our cover. The announcement of this private school has excited great satisfaction, and we have no doubt of its future usefulness and prosperity. We have more to say about this.—Ed. L.]

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Sept. 24, 1842.

24 Men, 25 Women, 52 Boys, 60 Girls. Total, 161.

DISEASES.

Apoplexy	3	Intemperance	0
Asthma	0	Inflammation	0
Asphyxia	0	Of liver	0
Abscess	0	Of bladder	0
Abortion	0	Of brain	3
Bleeding	1	Of stomach	3
Bleeding from stomach	0	Of throat	5
Bleeding from uterus	0	Of lungs	7
Burned or scalded	2	Of bowels	5
Carbuncle	0	Of womb	0
Cholera infantum	21	Of kidneys	0
Cholera morbus	1	Insanity	2
Congestion of the Brain	0	Jaundice	0
Consumption	22	Killed by fighting	0
Convulsions	8	Lues Veuera	1
Croup or hives	4	Mortification	1
Debility	4	Malformation	0
Delirium tremens	0	Marasmus	17
Diabetes	0	Measles	0
Diarrhœa	3	Old age	4
Death from poison	0	Organic disease of heart	2
Dropsy	1	Palsy	0
Dropsy in head	4	Retention of urine	0
Dropsy in the chest	1	Rheumatism	0
Drowned	2	Spinal disease	1
Dysentery	1	Suicide	2
Erysipelas	1	Sprue	0
Executed	0	Small-pox	2
Fever	0	Tumor	1
Scarlet	0	Teething	4
Typhoid	3	Ulceration of intestines	1
Nervous	1	Unknown	0
Remittent	1	Ulceration of throat	0
Billious	1	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	0	Whooping cough	4
Hip Disease	1	Worms	0

John H. Griscom, City Inspector.

City Inspector's Office, Sept. 26, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, OCTOBER 8, 1842. No. 15.

[FOR THE NEW YORK LANCET.]

AIR BUBBLES IN THE FLUIDS OF THE EYE.

Muscæ Volitantes.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. II.

36. At an early period of this inquiry I thought that these obstructions were also in the *aqueous* humor, and I inferred, of course, that by puncturing the lower part of the cornea the viscid fluid would escape. But by the appearance of phenomena which cannot deceive, I am now convinced that the *opaque* bunches only exist in the liquor Morgagni; and whoever will take the trouble to make experiments with the lens of a pin hole, or look through the interstices of a double fold of black muslin when the sky is clear and the sun bright, will be assured of the fact.

37. The opinion among oculists of reputation is, that the capsule of the lens cannot be punctured without serious injury to vision, and that one of the consequences of it would be cataract. We have no well authenticated proof on record to warrant us in puncturing the capsule, for the purpose of evacuating the liquor Morgagni; but if it could be done with safety to the lens, relief would immediately be procured. Surely when a man is nearly blind from the obstruction of these opaque bodies, he would be willing to make the attempt; and after all, should cataract ensue, there is the remedy of extraction. As to the puncturing of the capsule, the slightest incision at the bottom would suffice; and a tube of very slender diameter might be introduced to draw off the viscid secretion if it did not come out freely.

38. We all know that the capsule would be replenished with the fluid in a few minutes, and if a new impetus could be given to the system, so as to produce a healthy action, the vessels of the eye might recover their tone, and secretion and absorption go on properly. At any rate, a person could scarcely be worse off if the experiment should fail, for the annoyance of these opaque bunches is difficult to bear. I have heard those afflicted say that blindness could scarcely be worse, for added to the loss of so much vision, there is always sufficient inflammation and nervous excitement to cause great pain. There is a constant strain on the muscles of the eye, which is likewise subjected to many irritating applications; all of which only add to the disease, for local remedies only aggravate it. But while the blurred vision continues there will always be attempts at relief; and so much ignorance has hitherto existed with regard to diseases of the eye, that there was scarcely an oculist who understood them. Modern surgery has added greatly to our knowledge, and in consequence has placed the accomplished oculist as the first in the rank of surgery. Very great attention is now paid to the pathological and morbid anatomy of the eye, and from this day, henceforth we may date the improvement in ophthalmic surgery,—and who has so largely contributed to it as Dr. Elliot? This branch of the art will not be given up, as hitherto, to empirics, but the educated surgeon will seize on it as the widest field in which to display his powers.

39. As the ophthalmic art has so greatly advanced, should the puncturing of the capsule ever produce cataract, the lens could be removed with safety. Unless the eye should be otherwise diseased, the removal of the opaque lens would almost always restore vision; nay, Mr. Middlemore, of the Binghampton Eye Infirmary, as I have elsewhere stated, says that from actual experiment on the eyes of rabbits, if the lens can be extracted without much laceration of the lenticular capsule, a new one will be formed again? As to the loss of the aqueous and vitreous humors it is now of little consequence, as Dr. Elliott—of whom I shall have frequent occasion to speak—has introduced a novel mode of replenishing these secretions. I shall explain his method in the course of this memoir.

40. With regard to the three floating spots or air globules, they can be readily distinguished from one another: for, in the first place, they are of different degrees of brightness; and secondly, they move with different velocities. Those in the liquor Morgagni are likewise of smaller size, and are sometimes attracted to what appears to be a tubular film. Very frequently this transparent tube is filled with air globules; and in fact, I have observed that many of the tubular vessels both of animal and vegetable formation, obtain their varicose form in consequence of the difference in the size of the air bubbles within them.

41. While looking through a very small pin hole, or through a double fold of black muslin of a certain thickness, when the sky is clear and bright, if we close the eyelids slowly and then open them quickly, we shall perceive a ridge across the figure at which we are looking. Figure O. This ridge is caused by the fluid that lubricates the conjunctiva It is pushed up in a heap by the closing of the lid, and its density across the figure is very perceptible, but it is more plainly seen if the eyelids are not quite closed.

42. During this experiment, as the eye is cast upwards, those who are troubled with *muscæ volitantes*, will perceive that the little opaque bunches are flying downwards. Many distinguished writers suppose that this is an illusion, that it arises from the motion of the eye, and that, in reality, these objects do not move. Dr. Abercrombie, in his 'Inquiry concerning the Intellectual Powers of Man,' calls these *real* objects 'false visual sensations;' and Mr. Mackenzie designates them as deceptions; which is an excusable error, as until I made the discovery they have never been examined by experiment. They are as real, as tangible, and as much objects of sight as any other object external to the cerebral organs of vision; they have, in reality, both form and substance.

43. It is only, as I before observed, when they are in knots or bunches, that they appear as dark spots flitting before the eye, and giving us the impression that they are outside of the eyeball. These little opaque bunches are of various shape, sometimes round and of the size of a pea, and frequently two or three bunches are connected. They appear to float in the air, and to fall on every white substance on which the eye rests. I never yet saw an eye that was free from air bubbles, and even the youngest and strongest eyes exhibit them in the form of strings of beads. All this can be ascertained by looking through pin holes, and it will be seen that they assume different shapes and alter their position with every motion of the eye. Sometimes they are huddled together irregularly, darting

from side to side, and up and down either singly or in links, as if they had life, but in reality they are only driven about in the fluids by the quick motion of the eye.

44. Sometimes these strings of air beads have a nucleus of bubbles attached to the end or middle, and these strings vary their form whenever the eyeball moves. These bunches thus attached to the connected bubbles are also muscæ volitantes; sometimes they exist only in one eye, a fact which can be ascertained by shutting the eyes alternately while looking through the pin holes.

45. The experiment by which these objects can be seen is so simple that it is surprising no one before this time discovered the mode of ascertaining of what they consisted. We have only to look through a small aperture in the card, and by moving the eye quickly or slowly, either up or down, or from side to side, these air bubbles in the form of strings will be seen floating about, either rising or falling. It will be ascertained in a moment that they are what I describe, nothing more than the common bubbles of air see in all fluids.

46. Mr. Mackenzie, in his able treatise on the diseases of the eye, observes that the 'muscæ volitantes seldom appear in the optic axis, but are generally to one or other side of it—or above or below.' But on examination through a pin hole, it will be seen that as they are neither more nor less than floating masses of bubbles, they are not confined to any one part of the fluid in which they move. They pass over the axis, and are propelled from side to side, or up or down, just as the eye moves. Mr. Mackenzie, in common with all writers on optics and on the ophthalmic art, thinks that the motion which the muscæ volitantes have, is a deception; he expressly states as follows, and I can do no better justice to this distinguished surgeon than to give the reader all his views on the subject.

47. 'All these motions are merely apparent. In those muscæ, indeed, which present the appearance of globules contained within transparent tubes, there is sometimes perceived a motion which is real, and which is probably that of the blood passing through the vessels of the retina or of the vitreous humor; *but neither these semi-transparent tubes themselves,* nor any of the filamentous *muscæ, or black spots, which are so frequently complained of, possess any real motion independent of the general motion of the eyeball.* If the cause of the muscæ volitantes, be it in the vitreous humor or in the retina, lies below the optic axis, it will produce an impression as if it were placed above the level of the eye, inducing us to turn our eyes that way, expecting to bring it in the centre of the eye, that we may view it more distinctly; and in this way the dark spots fly upwards. Slowly as the eyes descend, the muscæ come again in view. If the cause be placed much above the optic axis, be it above or below, to the right or to the left, it is impossible to gain a deliberate view of the spectrum which it produces. It flies, as it were, before us, and as quickly returns again to annoy the eye, equally tired of its presence and of the ineffectual attempts made to examine it more at leisure. But if the cause be within a few degrees of the optic axis, no difficulty is experienced in obtaining a distinct view of the muscæ.

48. '*Muscæ volitantes are never seen in the sense that objects out of the eye are seen.* Opaque spots in any part of the eye anterior to the retina, could never produce an image on that membrane sufficiently defined to give rise to such impressions as the generality of muscæ volitantes. Such spots might produce an obscurity of vision by intercepting the rays of light, exactly as specks on the cornea, depositions in the pupil, or incipient cataract does, or as any one may do by holding a piece of wire across and close to his cornea; but *no object within the eye (nor indeed without the eye, unless beyond a certain distance from the cornea,) can be brought to a focus on the retina,* or produce any other impression than a greater degree of dimness. This, however, is not the kind of impression produced in what we term muscæ volitantes. Even when these appearances are remote from the axis of vision, so that they cannot be dwelt upon, but are only glanced at, as if in passing, they are *too much defined to be of the nature of mere shadows* or intercepted light.

49. 'I by no means deny that the bunches of the arteria centralis retinæ, which ramify through the hyaloid membrane and end on the posterior hemisphere of the crystalline capsule, are capable of becoming varicose; that opaque depositions may take place in the lens; or opaque corpuscles float in the aqueous humor; but as these cannot cause muscæ volitantes, this disease must be referred either to the retina itself, including, of course, the three laminæ of which it is composed, or to the choroid. The probability is that the semi-transparent muscæ of tabular form are owing to a dilation of the branches of the arteria centralis retinæ; and that the dark muscæ are the effect of certain portions of the retina having become altogether insensible to light, either from the pressure of some irregular projecting point or points of the choroid, or from some other cause. We can conceive the nervous layer of the retina to be in one, or in many minute portions of its extent, so altered by disease, or so pressed upon by the neighboring parts in a morbid state as to be no longer stimulated by light at the parts affected, each of which will necessarily give rise to the sensation of a muscæ volitans. Blood effused, either by the vessels of the retina or those of the choroid, is a likely cause of partial insensibility of the retina, and consequently of muscæ volitantes.'

I have given the whole of the remarks of this author, to show the opinion which generally prevails of this disease in the eye, called muscæ volitantes; but now that I have proved them to be real, tangible, independent bodies, as far as air bubbles can be called tangible, we cannot but wonder at the suggestions and conjectures which have been indulged in.

50. In the first place, what is the meaning of the term muscæ volitantes? It is intended to convey the idea of the flying of an insect—a fly—and if this had not been the opinion of the early authors who first wrote on the subject, we should have had a different term. But Mr. Mackenzie says that the muscæ volitantes do not possess any real motion independent of the general motion of the eye, and that all these motions are merely apparent. He describes several kinds of muscæ—those which present the appearance of globules contained within transparent tubes, and which sometimes appear to have a *real* motion. This motion, he thinks, is probably owing to the blood passing through the vessels of the retina or vitreous humor.

51. Now to prove that what are strictly called *muscæ volitantes*, have a *real* motion, let us look at them at candle light through a pin hole, or on a drop of water, or *through a very large pin hole covered with the saliva from the tongue.* The first object seen is the gauzy figure, (which I have previously described) fig. O, and, disregarding the fixed spots which are always to be found on it, let us only attend to the floating bodies which are likewise more or less always present, but which vary in shape. On casting our eye down—keeping the head quiet in the same position—and then raising it again, looking at the hole as before, we shall see the fluid which lubricates the conjunctiva, the aqueous humor, and the liquor Morgagni, all moving quickly.

52. When the eye thus drops down and is raised again, the dimmest air bubbles will be seen rising first; thrown up, as it were—by the motion of the eye they then descend as rapidly. If we wink, then the air bubbles in the conjunctival fluid will fall down in great number and disappear, for they do not rise and then fall as the other floating air bubbles do. But the most remarkable appearance, when the eye is raised again to look at the figure, is the motion of the two fluids—the aqueous humor and the Morgagni humor. They will be seen to move downwards in a few seconds, and when at the bottom of the circular figure they also disappear.

53. Before I explain this upward motion of the fluids, and the downward motion of the air bubbles, I must turn again to Mr. Mackenzie. He speaks of the appearance of the muscæ as above and below the optic axis, and of our inability to examine them at leisure. Now that he knows they really do move independently of the eyeball, he can bring them across the axis whenever he chooses; a slight jerk of the eye when the bunch makes its appearance at the top of the figure, will place it in the centre, and by fixing one eye steadily on the upper part of the circumference of the pin hole we shall observe the bunch of muscæ slowly descending. To be sure, all this requires tact and patience, but must we prefer to remain in error rather than take a little trouble to get at the truth? Men require to be rightly informed, and they certainly expect, when a philosopher undertakes to enlighten them, that all the requisite attention and pains have been bestowed.

54. Then, again, he observes that 'muscæ volitantes are never seen in the sense that objects out of the eye are seen.' I think I have abundantly proved that these floating bodies *are* seen in the way that all external things are seen, for every substance or object external to the cerebral organs of vision, is an object of perception to the mental power, wherever this mental power may be. The eyeball and its machinery with its secretions, can all be seen by this central intelligence. Has it not been proved long since that the blood vessels of the retina can be seen? In fact, this discovery was made long before it was mentioned by Soemmering. Have I not demonstrated incontrovertibly, that the vascular tissue of the choroids, the central artery, the compartments of the vitreous humor, the motion of the lens, the spots between the laminæ of the cornea, the fluids of the aqueous and Morgagni chambers, and the periphery of the pupil, are all perceptible to mental vision—the only vision we possess?

55. We see all this apparatus as distinctly as if it were in our hand, and wherefore is it that it is *not* seen in the sense that objects external to the eye are seen. Mr. Mackenzie, along with all the other distinguished men of the day, hangs to the notion that objects or images are produced on the retina, and he infers that muscæ could not be seen as other objects are, because these opaque spots could never produce an image on the retina sufficiently defined to give rise to such impressions as these muscæ. He says that *no object within the eye* (*nor indeed without the eye unless beyond a certain distance from the cornea*) *can be brought to a focus on the retina, or produce any other impression than a greater degree of dimness.* He infers, therefore, that as these muscæ are well defined even when only glanced at as they are floating rapidly beyond the axis, they cannot be considered as shadows or intercepted light, such as is produced when a wire is held close to the cornea.

56. All optical theories, with regard to the promotion of images on the retina, are founded on the opinion that there must be a half-way place in which these images can adjust themselves before they are received on the cerebral organs. The inverted image which Scheiner discovered after cutting away the coats at the back part of an eye, only the more fully established the theory of the formation of images within the eyeball. This error I have sufficiently explained, for the same effect is produced when the whole apparatus is taken from the eye. I shall now add another proof that images once inverted will always be seen inverted.

57. I have already observed, that when the eye, after being cast down, is raised again to the spectrum on the pin hole, the air bubbles (either when connected like beads on a string, or in bunches such as are called muscæ volitantes) all fall to the bottom. That they fall independently of any peculiar motion of the eye can be satisfactorily ascertained, for if our eye is steadily fixed on any particular permanent spot on the figure, we shall perceive at once that although the eyeball is perfectly still, the air globules are slowly descending.

58. Now it is well known that the specific gravity of these bodies—air bubbles—is lighter than the fluid in which they move; I was, therefore, very much puzzled to account for their *downward* motion, and it was quite as difficult to account for the *upward* motion of the fluids. At first I conjectured that the quick movement of the eye upwards forced the fluids upwards likewise, and that the same force had driven the air globules downwards. Repeated experiment, however, proved that this was not the case, for the rise of the fluids and the fall of the air globules, as well as of the muscæ volitantes, did not take place at the instant the eyeball returned to its natural position, but a few seconds afterwards. It then occurred to me that *the whole spectrum was inverted!*

59. The eye itself soon afforded me sufficient proof that my suspicion was correct, for while looking on the surface of this spectrum, either on the pin hole or drop of water—in fact on any lens, I perceived that when I pushed up the *lower* lid of my eye, the upper one on the spectrum came down, and when I pulled down the *upper* lid the under one rose up!

Is not this a startling fact to physiologists? Does it not prove that an internal object like the globules, is always inverted when the unobstructed light from a lens of short focus enters the axis of the eye? Does it not prove that an inverted image of an *external* object never would be seen unless an artificial lens like the pin hole were present; and are not pin holes, the interstices of black muslin, drops of water, or any small aperture, lenses in the strict sense of the word? Do we not see these floating objects inverted when we look at the clear unobstructed light; simply by their inversion on the lens of our own eye, which acts as a foreign lens—the floating object being between the lens and the vitreous humor?

60. If no lens is before our eye, and we pull down the upper eyelid *without pressing the eyeball itself*, we perceive, at once, that it is the upper lid which is coming down. Here, in this case, when no foreign lens obstructed the rays of light, the eyelids, being an external object, and being outside of the crystalline lens, are represented in their true position, for the rays from the whole angle of vision give an erect or true representation of an external object. But the case is different when an external lens of short focus is close to the eye, for then this lens becomes the luminous radiating point—the rays therefore from the eyelids do not converge to the crystalline axis, but are thrown back on the radiating point, and thence diverge, so that the objects they represent are inverted.

61. I have observed that if we pull down or push up the eyelids, catching hold of the skin and detaching the lid from the eyeball, they will move in the direction we draw them. But if while pulling down the upper lid or in pushing up the under one, we press on the ball ever so gently, it will be perceived that although the lid moves precisely as we direct it, yet the axis of vision is changed by the pressure, slight as it is, and external objects shift their position, but do not lose their erectness. By looking at the objects with the disengaged eye, while we are moving the other, we shall find out the amount of motion.

62. It may be assumed as an incontrovertible fact, that objects once seen inverted, or which become inverted by the crossing of those rays of light in the accidental, or non-essential focus, always remain inverted. Nor is it possible, unless another lens is added, to make the image appear erect again, by any refractive process whatever. The globules of air, therefore, as well as all those that are connected together like strings of beads, and those floating bunches called muscæ volitantes, are, in reality, moving in a direction contrary to the one in which we see them, for the crystalline lens, when objects are floating on its surface, or between the laminæ of the cornea or in the Morgagni fluid, acts like a foreign lens of short focus near the eye, because the cone of rays from the objects cannot make an angle acute enough to enter the *axis* of the eye. Objects, of course, are in this case al-

ways inverted, and this is very plainly verified while we are on the water when the light is intense. When looking at the mass of floating air globules we find that the clouds and the trees on the margin of the river are erect, as well as objects in the boat; and that the floating globules and strings of air beads all move in a direction *contrary* to their real motion. They sink when we know that according to their density then should rise.

63. Now this proves that the rays from the whole field of view, enter the axis of the eye and thus represent the objects erect, while the rays from the crystalline, as the air globules cannot, *en masse*, from a cone sufficiently acute to enter the axis, cross each other and thus produce the inversion incident to divergent rays.

64. I have elsewhere observed, and the remark cannot, to the perfect comprehension of the phenomenon, be too often repeated, that where a lens is at a certain distance from the eye, an object external to it, is seen in an inverted position, because it is in the non-essential focus, and therefore proceeds from divergent rays. It requires, therefore, that the object to be examined should be within the limits of the field of view of the lens, and of such a size as that the cone of rays from it shall form a sufficiently acute angle to enter the axis of the lens.

65. An external object can be seen in an erect position through every point of a *plane* surface of glass, because there are millions of points through which we can see the focus of convergent rays, but in a convex surface there is only *one* point, and that is the axis. The object, therefore, must be within the limited field of view of the lens and of a size proportionate to the convexity of it, and when these conditions are observed, the object will always be erect if the axis of the lens and of our eye are parallel.

66. Since writing the above, I have met with the following remarks by the editor of the British and Foreign Medical Review, January, 1838—page 36: 'It was formerly a generally received opinion that penetrating wounds of the lenticular capsule are necessarily followed by cataract. This is true, however, only with reference to *lacerated* wounds. Dr. Warnock not long ago instituted a series of experiments on the eyes of living animals, for the purpose of ascertaining the effect of wounds of the capsule and lens. Among other results, Dr. Warnock found that if the outer lamilla of the capsule be punctured, incised, or even cauterized, no scar is left nor even when both lamillæ along with the membranous coat of the lens (?) are pierced. But that in every instance of laceration of the fibres, a permanent, opaque spot was the inevitable consequence.' Dr. Rosas, in describing wounds of the lens, corroborates the above. He says:—'When wounds go deeply into the lens, or when the anterior segment of the capsule is cut in several places, or torn across, so much more certainly is cataract developed. Should the iris and ciliary body have been simultaneously injured, then is the accident complicated with exudation of lymph and adhesion of adjacent parts.'

67. Now, if these experiments are sufficient in number, and have been accurately performed, as is no doubt the case, then all the difficulties of evacuating the capsule of the lens vanish. It would then require no more than a slight puncture of the lower part of the capsule to empty it of the liquor Morgagni, and thus get rid of muscæ volitantes and other obstructions.

THEORY OF RESPIRATION.

[FROM LIEBIG'S ANIMAL CHEMISTRY, ETC.]

During the passage of venous blood through the lungs, the globules change their color; and with this change of color, oxygen is absorbed from the atmosphere. Further, for every volume of oxygen absorbed, an equal volume of carbonic acid is, in most cases, given out.

The red globules contain a *compound of iron;* and no other constituent of the body contains iron. 'Whatever change the other constituents of the blood undergo in the lungs, thus much is certain, that the globules of venous blood experience a change of color, and that this change depends on the action of oxygen.

Now we observe that the globules of arterial blood retain their color in the larger vessels, and lose it only during their passage through the capillaries. All those constituents of venous blood, which are capable of combining with oxygen, take up a corresponding quantity of it in the lungs. Experiments made with arterial serum have shown, that when in contact with oxygen it does not diminish the volume of that gas. Venous blood, in contact with oxygen, is reddened, while oxygen is absorbed; and a corresponding quantity of carbonic acid is formed.

It is evident that the change of color in the venous globules depends on the combination of some one of their elements with oxygen; and that this absorption of oxygen is attended with the separation of a certain quantity of carbonic acid gas.

This carbonic acid is not separated from the serum; for the serum does not possess the property, when in contact with oxygen, of giving off carbonic acid. On the contrary, when separated from the globules, it absorbs from half its volume to an equal volume of carbonic acid, and, at ordinary temperatures, is not saturated with that gas. (See the article 'Blut' in the 'Handwörterbuch der Chemie von Poggendorff, Wöhler, and Liebig, p. 877.)

Arterial blood, when drawn from the body, is soon altered; its florid color becomes dark red. The florid blood, which owes its color to the globules, becomes dark by the action of carbonic acid, and this change of color affects the globules, for florid blood absorbs a number of gases which do not dissolve in the fluid part of the blood when separated from the globules. ***It is evident, therefore, that the globules have the power of combining with gases.***

The globules of the blood change their color in different gases; and this change may be owing either to a combination or to a decomposition.

Sulphuretted hydrogen turns them blackish green and finally black; and the original red color cannot, in this case, be restored by contact with oxygen. Here a decomposition has obviously taken place.

The globules darkened by carbonic acid become again florid in oxygen, with disengagement of carbonic acid. The same thing takes place in nitrous oxide. It is clear that they have here undergone no decomposition, and, consequently, they possess the power of combining with gases, ***while the compound they form with carbonic acid is destroyed by oxygen.*** When left to themselves, out of the body, the compound formed with oxygen again becomes dark, but does not recover its florid color a second time by the action of oxygen.

The globules of the blood contain a compound of iron. From the never-failing presence of iron in red blood, we must conclude, that it is unquestionably necessary to animal life; and since physiology has proved, that the globules take no share in the process of nutrition, it cannot be doubted that they play a part in the process of respiration.

The compound of iron in the globules has the characters of an oxidised compound; for it is decomposed by sulphuretted hydrogen, exactly in the same way as the oxides or other analogous compounds of iron. By means of diluted mineral acids, peroxide (sesquioxide) of iron may be extracted, at the ordinary temperature, from the flesh or dried red coloring matter of the blood.

The characters of the compounds of iron may, perhaps, assist us to explain the share which that metal takes in the respiratory process. No other metal can be compared with iron, for the remarkable properties of its compounds.

The compounds of protoxide of iron possess the property of depriving other oxidised compounds of oxygen; while the compounds of peroxide of iron, under other circumstances, give up oxygen with the utmost facility.

Hydrated peroxide of iron, in contact with organic matters destitute of sulphur, is converted into carbonate of the protoxide.

Carbonate of protoxide of iron, in contact with water and oxygen, is decomposed; all the carbonic acid is given off, and, by absorption of oxygen, it passes into the hydrated peroxide, which may again be converted into a compound of the protoxide.

Not only the oxides of iron, but also the cyanides of that metal, exhibit similar properties. Prussian blue contains iron in combination with all the organic elements of the body; hydrogen and oxygen (water), carbon and nitrogen (cyanogen).

When it is exposed to light, cyanogen is given off, and it becomes white; in the dark it attracts oxygen, and recovers its blue color.

All these observations, taken together, lead to the opinion that the globules of arterial blood contain a compound of iron saturated with oxygen, which, in the living blood, loses its oxygen during its passage through the capillaries. The same thing occurs when it is separated from the body, and begins to undergo decomposition (to putrefy). The compound, rich in oxygen, passes, therefore, by the loss of oxygen (reduction), into one far less charged with that element. One of the products of oxidation formed in this process is carbonic acid. The compound of iron in the venous blood possesses the property of combining with carbonic acid; and it is obvious, that the globules of the arterial blood, after losing a part of their oxygen, will, if they meet with carbonic acid, combine with that substance.

When they reach the lungs, they will again take up the oxygen they have lost; for every volume of oxygen absorbed, a corresponding volume of carbonic acid will be separated; they will return to their former state; that is, they will again acquire the power of giving off oxygen.

For every volume of oxygen which the globules can give off, there will be formed (as carbonic acid contains its own volume of oxygen, without condensation) neither more nor less than an equal volume of carbonic acid. For every volume of oxygen which the globules are capable of absorbing, no more carbonic acid can possibly be separated than that volume of oxygen can produce.

When carbonate of protoxide of iron, by the absorption of oxygen, passes into the hydrated peroxide, there are given off, for every volume of oxygen necessary to the change from protoxide to peroxide, four volumes of carbonic acid gas.

But from one volume of oxygen only one volume of carbonic acid can be *produced;* and the absorption of one volume of oxygen can only cause, directly, the *separation* of an equal volume of carbonic acid. Consequently, the substance or compound which has lost its oxygen, during the passage of arterial into venous blood, must have been capable of absorbing or combining with carbonic acid; and we find, in point of fact, that the living blood is never, in any state, saturated with carbonic acid; that it is capable of taking up an additional quantity, without any apparent disturbance of the function of the globules. Thus, for example, after drinking effervescing wines, beer, or mineral waters, more carbonic acid must necessarily be expired than at other times. In all cases, where the oxygen of the arterial globules has been partly expended, otherwise than in the formation of organic acid, the amount of this latter gas expired will correspond exactly with that which has been formed; less, however, will be given out after the use of fat and of still wines, than after champagne.

According to the views now developed, the globules of arterial blood, in their passage through the capillaries, yield oxygen to certain constituents of the body. A small portion of this oxygen serves to produce the change of matter, and determines the separation of living parts and their conversion into lifeless compounds, as well as the formation of the secretions and excretions. The greater part, however, of the oxygen is employed in converting into oxidised compounds the newly formed substances, which no longer form part of the living tissues.

In their return towards the heart, the globules which have lost their oxygen combine with carbonic acid, producing venous blood; and, when they reach the lungs, an exchange takes place between this carbonic acid and the oxygen of the atmosphere.

The organic compound of iron, which exists in venous blood, recovers in the lungs the oxygen it had lost, and, in consequence of this absorption of oxygen, the carbonic acid in combination with it is separated.

All the compounds present in venous blood, which have an attraction for oxygen, are converted, in the lungs, like the globules, into more highly oxidised compounds; a certain amount of carbonic acid is formed, of which a part always remains dissolved in the serum of the blood.

The quantity of carbonic acid dissolved, or of that combined with soda, must be equal in venous and arterial blood, since both have the same temperature; but arterial blood, when drawn, must, after a short time, contain a larger quantity of carbonic acid than venous blood, because the oxygen of the globules is expended in producing that compound.

Hence, in the animal organism, two processes of oxidation are going on; one in the lungs, the other in the capillaries. By means of the former, in spite of the degree of cooling, and of the increased evaporation which takes place there, the constant temperature of the lungs is kept up; while the heat of the rest of the body is supplied by the latter.

A man, who expires daily 13·9 oz. of carbon, in the form of carbonic acid, consumes, in 24 hours, 37 oz. of oxygen, which occupy a space equal to 807 litres = 51,648 cubic inches (hessian).

If we reckon 18 respirations to a minute, we have, in 24 hours, 25,920 respirations; and, consequently, in each respiration, there are taken into the blood $\frac{51648}{25920}$ = 1·99 cubic inch of oxygen.

In one minute, therefore, there are added to the constituents of the blood 18 × 1·99 = 35·8 cubic inches of oxygen, which, at the ordinary temperature, weigh rather less than 12 grains.

If we now assume, that in one minute 10 lbs. of blood pass through the lungs (Müller, Physiologie, vol. i. p. 345), and that this quantity of blood measures 320 cubic inches, then 1 cubic inch of oxygen unites with 9 cubic inches of blood, very nearly.

According to the researches of Dénis, Richardson, and Nasse (Handwörterbuch der Physiologie, vol. i. p, 138), 10,000 parts of blood contain 8 parts of peroxide of iron. Consequently, 76,800 grains (10 lbs. hessian) of blood contain 61·54 grains of peroxide of iron in arterial blood, = 55·14 of protoxide in venous blood.

Let us now assume that the iron of the globules of venous blood is in the state of protoxide. It follows, that 55·14 grains of protoxide of iron, in passing through the lungs, take up, in one minute, 6·40 grains of oxygen (the quantity necessary to convert it into peroxide). But since, in the same time, the 10 lbs. of blood have taken up 12 grains of oxygen, there remain 5·60 grains of oxygen, which combine with the other constituents of the blood.

Now, 55·14 grains of protoxide of iron combine with 34·8 grains of carbonic acid, which occupy the volume of 73 cubic inches. It is obvious, therefore, that the amount of iron present in the blood, if in the state of protoxide, is sufficient to furnish the means of carrying or transporting twice as much carbonic acid as can possibly be formed by the oxygen absorbed in the lungs.

The hypothesis just developed rests on well-known observations, and, indeed, explains completely the process of respiration, as far as it depends on the globules of the blood. It does not exclude the opinion that carbonic acid may reach the lungs in other ways; that certain other constituents of the blood may give rise to the formation of carbonic acid in the lungs. But all this has no connection with that vital process by which the heat necessary for the support of life is generated in every part of the body. Now it is this alone which, for the present, can be considered as the object truly worthy of investigation. It is not, indeed, uninteresting to inquire, why dark blood becomes florid by the action of nitre, common salt, &c.; but this question has no relation with the natural respiratory process.

The frightful effects of sulphuretted hydrogen, and of prussic acid, which, when inspired, put a stop to all the phenomena of motion in a few seconds, are explained in a natural manner by the well-known action of these compounds on those of iron, when alkalies are present; and free alkali is never absent in the blood.

Let us suppose that the globules lose their property of absorbing oxygen, and of afterwards giving up this oxygen and carrying off the resulting carbonic acid; such a hypothetical state of disease must instantly become perceptible in the temperature and other vital phenomena of the body. The change of matter will be arrested, while yet the vital motions will not be instantly stopped.

The conductors of force, the nerves, will convey, as before, to the heart and intestines the power necessary for their functions. This power they will receive from the muscular system, while, as no change of matter takes place in the latter, the supply must soon fail. As no change of matter occurs, no lifeless compounds are separated, neither bile nor urine can be formed; and the temperature of the body must sink.

This state of matters soon puts a stop to the process of nutrition, and, sooner or later, death must follow, but unaccompanied by febrile symptoms, which, in this case, is a very important fact.

This example has been selected in order to show the importance and probable advantage of an examination of the blood in analogous diseased conditions. It cannot be, in the slightest degree, doubtful that the function ascribed to the blood globules may be considered as fully explained and cleared up, if, in such morbid conditions, we shall discover a change in their form, structure, or chemical characters, a change which must be recognizable by the use of appropriate re-agents.

If we consider the force which determines the vital phenomena as a property of certain substances, this view leads of itself to a new and more rigorous consideration of certain singular phenomena, which these very substances exhibit, in circumstances in which they no longer make a part of living organisms.

REVIEW DEPARTMENT.

ON STRICTURE OF THE URETHRA.

BY ARNOTT, WADE, COOPER, ARNTZENIUS, ETC.

[An able article in Dr. Forbes's review, presents to us an epitome of the most modern views on the nature and treatment of stricture of the urethra, which we will endeavor to condense. The works of Arnott, Wade, Cooper, Arntzenius, and Franc, form the bases of the following observations.

Arnott describes the anatomy and relations of the urethra, but omits to dwell on the different relative positions which it assumes in infancy, and childhood, and the adult period.]

The bladder is a moveable viscus, and its relation to the arch of the pubes, (to which its membranous portion only is fixed by the triangular ligament,) is constantly varying from the condition of the surrounding viscera, and from the influence of age. In the fœtus the bladder is placed almost entirely in the abdomen, and above the pubes, the pelvis not being, as yet, sufficiently developed to admit of its descent. The rectum at this period, distended with meconium, and filling the whole of the imperfectly formed pelvis, is another obstacle to the descent of the bladder to the position it subsequently occupies. As the bones of the pelvis acquire with age an increase of size, and become more and more developed, so the bladder is found lower and lower in the pelvis, till, in old age, it is even in a moderately distended state almost totally concealed behind the bones of the pubis. These anatomical facts show that Dr. Arnott's description of the opening of the urethra into the bladder can only relate to the earlier periods of life; in adult and old age, there is always a pouch of greater or less size formed behind the urethral opening into the bladder.

So well aware was the late M. Dupuytren of this situation of the bladder in infancy, and at the earlier periods of life, and also of the occupation of the pelvis by the rectum at this age, that he used to give the following directions as necessary to be observed in the performance of the lateral operation for lithotomy in young children: It results from this disposition, that if a knife is attempted to be plunged into the bladder, or drawn from it in a horizontal direction, the instrument will, in the first instance, pass between the bladder and the rectum, and penetrate the latter; and in the second, after having divided the neck of the bladder, and prostate, at this period very small, the instrument wounds the intestine longitudinally. From which it is easy to conclude that, in order to avoid the rectum in children on whom the operation for lithotomy is performed in the ordinary situation, it will be necessary to give to the knife a direction parallel to that of a line which, setting out from the umbilicus, shall terminate at the tuberosity of the ischium of the left side; and consequently, that the handle of the instrument must always be more depressed, and the point more raised than in the adult.

Hunter, it is well known, believed that strictures were never produced by gonorrhœa. Many modern surgeons, as Abernethy, Sir E. Home, Desault, and others, believed and taught that strictures were generally produced by the employment of injections during the inflammatory stage of gonorrhœa. We have no hesitation in confidently declaring that we are much more likely to expose our patient to the chance of stricture by totally omitting the use of injections in gonorrhœa than by their judicious employ. The quicker a gonorrhœa is cured the less likely are we to have stricture follow it. Gonorrhœa is a disease whose ill consequences are in a direct ratio with the period of its continuance. Cure it quickly if you can, but at the same time cure it completely. If a spot of chronic inflammation remain, however trivial it may appear in the commencement, it will slowly thicken, and destroy the elasticity of the urethra.

[Stricture is generally treated by simple dilatation, dilatation by fluid pressure, or by the bougie armed with the potassa fusa, or the nitrate of silver. Each of these varieties of treatment is useful in particular cases. The bougies used by Dr. Arntzenius for the purpose of exploring the urethra are made of 'a strip of parchment rolled up so tightly that its layers adhere pretty firmly to one another, and which has at one end of it a knob or drop of glue made of boiled parchment. This knob contributes very much to the facility of introducing the instrument into a stricture; one can feel it slipping in; and then, by the heat of the urethra, it melts and the bougie unrolls of itself, while the melted glue is retained without injury to the urethra, and does not possess the slightest degree of any irritating quality. Such instruments may be manufactured of very small size, and yet possess sufficient strength; and their unrolling is rather advantageous than injurious, in consequence of the slow dilatation to which the stricture is thus subjected.']

Their cheapness is mentioned by the author as an additional recommendation of these bougies, and this is not an unnecessary quality, since in general each can be used only once. Whether they deserve all the praise bestowed on them experience only can decide; to those who are disposed to try them we can give our evidence that the author does not seem one accustomed to speak rashly or to recommend unjustly, and that in general the bougies with knobbed extremities, so highly commended by Sir Charles Bell, are, of all, the most useful for the purpose of exploring the urethra, whatever M. Ricord may say to the contrary.

There are three modes in which the treatment of dilatation may be performed: the first, which is most commonly practised in this country, is that of gradual dilatation by bougies of various kinds, the size being slowly increased. The second is the forced dilatation of Mayer and Lallemand, to which we need not more particularly allude, its dangers being such that it is not likely to be practised by any prudent surgeon in this country.

[Dr. Arntzenius depends chiefly on simple dilatation with bougies, but the length of time occupied in his treatment must be an objection with many; and especially when the urethra is exceedingly sensible and irritable; and moreover, when the stricture is indicated, 'the use of bougies will only procure a certain amount of benefit. In these, the most useful means are, bougies with their ends smeared with nitrate of silver or corrosive sublimate.']

In proposing the employment of dilatation by fluid pressure, Dr. Arnott passes in review the inconveniences and evils likely to arise from the use of the simple bougie. In noticing the rationale of the mode of cure effected by these instruments he contends, and we think with great reason, that the cure is seldom permanent. The first effect of the introduction of a bougie sufficiently large to pass through a permanent stricture is violent distension of the diseased part of the urethra, which, if the instrument can be left in the canal, gradually diminishes by dilatation or absorption taking place; so that at last the instrument remains in the canal without any distending action. 'After this its longer continuance in the passage can be of little avail, but may prove hurtful by the irritation excited. In curing strictures by the bougie, it often happens, from the increased tendency to contract, that, in the intervals between the introduction, whatever is gained by one is nearly lost before the succeeding, and this interruption to the process of distension, with the irritation produced by the so frequent passing of an instrument, is sufficient to account for the ordinary tediousness of the cure.' To obviate, in some measure, the evils attendant on the use of bougies of a fixed size, surgeons have had recourse to the employment of instruments composed of substances which swell by heat and moisture, and thus become enlarged when suffered to remain for a certain time in the urethra; tents made of sponge, and bougies manufactured of catgut, leather, &c., &c., have been devised for this purpose. Dr. Arnott's fluid dilator was constructed with the same views, viz., the capability of being enlarged when passed into the strictured part of the urethra.

Dr. Arnott states that a dilator for the cure of strictures should be of little bulk, and of easy introduction, and should be made capable of assuming and retaining any shape and magnitude when in the urethra; it should also be capable of exerting a distending force to any degree, and always under control. Such are the properties and advantages assumed by Dr. Arnott for his fluid dilator. It consists of 'a tube of oiled silk, lined with the thin gut of some small animal to make it air-tight, and attached to the extremity of a small canula, by which it is distended with air or water from a bag or syringe at the outer end, with a stop-cock or valve to keep the air or water in when received.'

For the particular description of the whole apparatus, we refer the reader to Dr. Arnott's treatise.

'The only part of the preparation of the dilator requiring nicety of execution, is the attachment of the distensible tube to the conducting tube and wire, which must be at once very neat and very secure. The silk tube and lining gut should be tied on together, the artist taking care that the wire be kept exactly in the axis of the tube, or that the wrinkles or folds at the extremity be equal all round. The tyings may be made conical by notching the extremity of the silk, after two or three turns of the small strong waxed silk thread have been made round it, and then by continuing the thread completely over it. The tyings should then be smoothed by a coating of bougie wax, and if unvarnished silk has been used, the operation is completed by covering both the silk and the tyings with a bit of gut. The secure attachment of the distensible tube to the canula and wire is a matter of great importance; for, should the silk become detached in the canal beyond the stricture, it might happen that the combined action of the urethra and flow of urine would not be able to expel it, until the stricture were fully dilated; it behooves therefore the instrument maker and the surgeon, to be careful that there exist no such hazard.'—(pp. 227-8.)

The distance from the orifice of the urethra of the stricture to be dilated must be first measured by a soft wax bougie, passed through a canula, which being gently pressed against the anterior surface, and opening of the stricture gives, on being withdrawn, an exact representation of the diseased part. This bougie, Ducamp called his '*sonde exploratrice.*'

The dilator is now to be passed into the stricture, its presence within it may be known by the distance of the stricture from the orifice of the meatus, (previously measured by the soft bougie,) and the peculiar sensation experienced by the passage of the knobbed extremity of the central wire through the compacted and uneven portion of the urethra. Dr. Arnott sometimes introduces the dilator through a canula. As soon as the bag is sufficiently within the stricture, as much air is to be injected into it as the patient can easily bear; and during the time it remains in the urethra, the future admission or escape of the air is regulated by the sensations of the patient; that is, if the feeling of distension abate, more air may be injected, but if it should increase into pain, a little of the air may be allowed to escape.

Dr. Arnott enters largely into the evils and inconveniences arising from the use of ordinary bougies, whether by forced or gradual dilatation; and contrasts them with the advantages held out by the fluid dilator, both to the patient and practitioner. We must confess that the argument appears to us in favor of Dr. Arnott, and we are only sorry that a more extended practical application of his remedy has not been made. This, we apprehend, must arise from a fancied difficulty either in the preparation or employ of the instrument. Ducamp was eminently successful in the application of his dilator, and we cannot understand why the same application has not been made of the original invention in this country. There is one evil to which we are afraid the fluid dilator is liable, although this may be avoided by limiting the size of the dilator when fully distended, and being extremely careful in the application of the distending force. The accident to which we refer is rupture of the urethra; one case is even related of it by Dr. Arnott, in which the application of the principle was made by the patient himself, 'who in 1834 employed the dilator invented by Dr. Arnott, from which considerable relief was obtained. In 1837, finding the disease had returned, and that the stricture had nearly closed up again, he attempted to use the dilator himself, and in doing so, had the misfortune to burst the urethra, and thus break a passage into the rectum.' We suppose in this case, the stricture was in the membranous portion of the urethra, and we must say that in instances where, in this situation, stricture exists, and the elasticity of the walls of the urethra are destroyed, rupture of the urethra from the employment of the fluid dilator is not unlikely, without the greatest caution, to occur.

The next mode of treating strictures is by the application of armed bougies to the diseased portion of the urethra. Mr. Wade revives the practice of Mr. Whateley, namely, the use of bougies armed with potassa fusa. This practice, very successful in the hands of the latter surgeon, had fallen into disuse, but has been again employed, and apparently with success, by Mr. Wade. The cases in which the potassa fusa may be employed with hope of success are, according to Mr. Wade, hard fibro-cartilaginous strictures, impervious to instruments without the employment of injurious pressure; hard strictures of long standing, which, although admitting the passage of a small bougie, bleed freely on its introduction; irritable strictures; spasmodic strictures, not arising from acute inflammation of the urethra; and strictures which have a marked disposition to contraction. In order to observe the effect of the potassa fusa, on strictures of the urethra, Mr. Wade applied it, in the same manner as in stricture, to hard spots upon the tongue, caused by slight thickening of its mucous and submucous tissues. 'The part in immediate contact with the potash quickly changes to a deep brown, surrounded by a small circle, and a little bloody serum oozes out. For two or three days afterwards the surface has a whitish appearance, and, at the end of a week or less, usually looks quite healthy; no ulceration ensues.'

Mr. Wade concludes that the caustic potash acts beneficially upon strictures: first, by its dissolvent powers; secondly, by promoting absorption, and stimulating the congested vessels to contraction; thirdly, by relieving irritability and inflammation.

Mr. Wade believes the potassa fusa to possess great superiority over the argenti nitras in opening a stricture. It does not occasion a slough, and hence the painful sensation produced by the urine passing over an ulcerated surface is avoided.

The following directions are given by Mr. Wade for the employment of this remedy:—

'Before using the potash, a bougie should be passed down to the stricture, that its distance from the orifice of the urethra may be correctly ascertained. A small piece of potassa fusa should be inserted into a hole made in the point of a soft bougie; the eighth part of a grain is the smallest and a grain the largest quantity I am in the habit of using; but it will be rarely necessary to exceed the sixth of a grain. It will be well to make two notches on the bougie containing the potash; one marking the exact distance of the stricture, the other an inch beyond; as, very probably, on introducing the armed bougie, the first mark may be concealed within the urethra, from the penis being more stretched than when the measurement was taken. The bougie must be well mounted round the potassa fusa, so as to prevent the alkali from projecting; and it should be so placed, that it may be more applied to the upper than the lower part of the stricture for obvious reasons. Armed bougies should be well rounded at their points, to guard the urethra from the action of the potash before it reaches the stricture. In very bad cases it may be advisable occasionally to use the potassa fusa in the recumbent position, as it will then not only be the best applied to the surface of the stricture, but be most likely to penetrate its texture, which, in old and hard obstructions, is very desirable. To impervious strictures, from 3 to 4 are the sizes of the bougies I generally employ when using the potassa fusa; and to such as are pervious, they should be used of a size or two larger than the obstruction which the point of the instrument should penetrate. The armed bougie must be rapidly passed down to the stricture, and held against it with gentle but steadily continued pressure, for one, two, or three minutes, according to the nature of the obstruction, which, if very irritable and readily bleeding, the shortest time, or even less, should be at first selected as the most prudent course.'

In ordinary cases this remedy may be applied every second or third day. In irritable strictures it may be well to allow four days to elapse between the applications. All the irritation produced by one application must be allowed to subside before a second is resolved on. 'The potassa fusa should be kept in a phial with a ground-glass stopper. It should not be broken till required for immediate use.'

According to Dr. Arntzenius, in cases of strictures absolutely impervious, the practitioner has always four methods from which to choose, namely, the forcible catheterism of Dessault and Boyer, the forcible injections of Amussat, the puncture of the bladder, and the cutting into the urethra behind the stricture. Against the first, objections cannot, he holds, be too strongly stated; it is always a dangerous, often an unsuccessful, and sometimes a fatal proceeding, and the chances must always be that more harm will be done by it than good. The violent injection of warm water can be useful in very few cases, and even in the very rare instances for which (imagining them to be common occurrences) the plan was originally invented, namely, those in which the strictured part is completely closed by a lump of mucus, the injection of water is not preferable to the introduction of a bougie, but commonly produces more pain. The puncture of the bladder above the pubis is at once the easiest and the safest operation; its danger has been much exaggerated, and it is most probable that the deaths that have followed its adoption have resulted not from its effects, but from its not having been performed sufficiently early. The puncture through the rectum is preferable to it only in the few cases in which the bladder lies very deep and far back; and the puncture through the perineum should be adopted only when effusion of urine has already taken place. The last mode of operation, by cutting into the urethra behind the stricture, is peculiarly adapted to cases in which the retention depends on obstruction by foreign bodies in the canal, or in which the urethra is manifestly very much dilated behind the stricture; but in others, the uncertainty of finding that portion of the urethra which is to be cut into, and of finding it sufficiently healthy for the introduction of an instrument, form important objections to this method. (Arntzenius, pp. 378–83.)

The propriety of these conclusions is now proved, we believe, by the experience of the best surgeons.

'It must,' says Mr. Cooper, 'be continually borne in mind, that all danger is not obviated by the avoidance of force; for the gentle use of the instrument may produce equally bad effects if it be injudiciously handled. On first examining the stricture, either a silver catheter or a bougie may be used for the purpose of ascertaining its seat and condition. No. 6 is the best-sized instrument for this object; it is nearly of the size of the urethra, and is much less likely than a smaller one to get entangled in the lacunæ of the canal. When the instrument is first passed down to the stricture, gentle pressure should be exercised, and, if its passage be resisted, should be continued for a few minutes. If the obstruction be owing to muscular spasm, continued pressure of three or four minutes will be sufficient to overcome the contraction; if, after that time, however, the obstacle does not yield, its persistence evidently depends upon the density of an adventitious deposition. When, in such a case, no great pain is experienced by the degree of pressure hitherto employed, and no bleeding occurs, force may be used to the full extent considered safe by the surgeons; but if this is still ineffectual, no further mechanical means should be had recourse to, (unless the bladder be much distended and the symptoms of retention urgent,) but leeches to the perineum and a purgative draught should be prescribed. It generally happens, in cases of no very long standing, that benefit is at once derived from this treatment; and I have frequently seen the patient recover after it had been adopted for three or four alternate days; but in cases of older date, great difficulty of micturition is often found to remain, in spite of it. To combat this symptom, the application of the bougie should be continued; as it is now ascertained that the difficulty of directing the instrument into the bladder depends upon the density of the stricture, and not upon muscular contraction. A new indication now therefore presents itself, namely, the removal of the adventitious matter; this is most readily effected by maintaining an equable degree of force on the surface of the stricture, which induces inflammation and softening down of the newly-formed substance. In the course of a few days, suppuration will be found to have been set up; after which, five or six repetitions of the application of the instrument will be sufficient to effect its passage through the obstruction; and thus will be performed a cure of stricture in what I may term its second stage.

'It is in this second stage that the precaution which I have alluded to above is necessary; for it is requisite to be as cautious with respect to the precise direction given to the instrument when thus gently applied, as when force is used to push the catheter or sound into the bladder; inasmuch as, without proper attention to the direction of the instrument, a false passage is as likely to be produced in the one case as in the other. This I shall shortly be able to show by relating cases in point. If gentle pressure be repeatedly made against the sides of the urethra, instead of upon the stricture itself, the mucous membrane naturally yields to the continued pressure of the instrument, and a new passage is gradually produced, which by violence is frequently effected at once. When an opening has thus been formed in the urethra, it is not a necessary consequence that any train of symptoms should at once point out the error which has been committed. On the contrary, from the comparative facility with which the instrument passes onwards towards the bladder, the surgeon fancies, at first, that he has overcome the true source of obstruction, and indeed frequently succeeds in reaching the bladder with his instrument, having pushed it again into the urethra or through the prostate gland: a flow of urine then ensues, which gives him reason to suppose that the cure is complete. On the other hand, however, the urine is sometimes extravasated, as soon as the false passage has been made; and abscess is formed in the perineum, and all the symptoms follow inseparable from such a state of things, requiring, at once, the laying open of the perineum, and the evacuation of the extravasated urine; and leading to the abandonment of the gentle mode of treatment, for the cutting through of the permanent stricture.'—*Brit. and For. Med. Rev.*

Enchiridion Medicum; or Manual of the Practice of Medicine. The result of fifty years' experience. By C. W. HUFELAND, Physician in ordinary to the late King of Prussia, &c. From the Sixth German Edition. Translated by CASPAR BRUCHHAUSEN, M. S. Revised for the Proprietor by ROBERT NELSON, M. D. New York: published by William Radde, 322 Broadway. 1842. pp. 630.

The name of HUFELAND is honorably identified with the medical science of Germany. In the present interesting volume the experience of his life is recorded, in a plain and practical manner. We have read a considerable portion of the work, with pleasure and profit,—and that is more than we can conscientiously say after the perusal of not a few of the medical volumes which at present issue from the press. The earnest student of nature, and the faithful observer of disease, unprejudiced by theory, will find much to instruct and enlighten them in this 'Manual.' To some of Hufeland's opinions we cannot subscribe, and his practice does not always meet our approbation; but we have not space to enter on a formal review of the work, and cannot specify the few points on which we differ from the author. We can, however, with sincerity, commend the volume to the notice of our readers. The 'Manual' has gone through numerous editions in the original and in French, and we think it will be equally successful in its present garb. The translation is faithful, and the good taste and scholarship of the distinguished gentleman who revised the sheets, are a sufficient guarantee of the accuracy and precision of the style and language. We are sure that we regard the interests of the science, in wishing an extensive circulation for this work.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, October 8, 1842.

The agitation of the great question of medical reform seems to be begun in earnest. In our last, we showed that public opinion was fairly aroused; and the profession is not inactive. Now that the great features of the proposed plan of reform are the subject of very general discussion, it is proper that we should state our views more fully in detail, and show as clearly as we can, the propriety of our measures.

The proposal to have the board of examiners paid by the State, is one which we hold to be of vital importance; because, as the body cannot possibly be held to a strict account of their stewardship, there would be a continually recurring danger of the power being abused, for the sake of the emoluments of office. We wish to be understood as implying no more distrust of this board than we would of any body of men; but in making legislative enactments, we must provide for all possible contingencies. No one confides more fully than we do in the public spirit of medical men, but every day's experience, proves that they are exposed to the same temptations and are governed by the same influences as others. Nor would this arrangement in all probability make any demand upon the resources of the State, for the statistics of graduation show an amount at present paid by candidates, which would more than suffice for a liberal salary to each of the examiners.

The great difficulty lies in this—can the power already granted in good faith and perpetuity to the existing corporations, be taken away from them without compromising justice? This is a serious question—and presents the only obstacle in the way of the measure. We wish to meet it fairly and openly, and we think it can be done on the following grounds:—A medical diploma purports to be an evidence of qualification to practice the art of physic. It is intended to protect the public from the impositions of unqualified persons; and the faith pledged on the part of the body to whom the power is delegated by the State, is that it shall be exercised so as to secure the public good. In view of this implied pledge, the right is given *in perpetuo*. To suppose that the power is given on any other condition, is to presuppose in the party giving it the most unheard of favoritism, and a species of policy which is perfectly suicidal. Now, in determining the question, we must inquire if faith has been kept by both parties; for if one fails to fulfil its part of the contract, then the contract is or should be null and void. In making this inquiry, we leave out of view, for the present, a fact which must not be forgotten—that tbe State cannot be said to have the right to give to certain individuals privileges which all equally competent men can justly claim; for we take the broad ground that justice should never be sacrificed to expediency; and, indeed, expediency itself is served only by that course of action which always keeps justice in view.

We have endeavored to show in former articles on this subject—and we appeal to the knowledge and candor of every medical man, in confirmation of our assertion,—that degrees, as they are now given, are no evidences of qualification to practice, and can at best be regarded only as proof of some proficiency in study. We also tried to unfold the reasons for this:—That in the first place, the bodies to whom is confided the selection of legal teachers, are inefficient, however honestly disposed to make a proper choice; in the second place, that being irresponsible, they allow other considerations than merit to influence appointments. In the third place, that the teachers thus appointed, could not do their duty, inasmuch as each man is both teacher and judge; and that the emoluments of office depending upon the number of pupils, and the number of pupils being governed by the popularity of the school, the power of giving degrees is prostituted to pecuniary considerations. We ask every man whether this be empty tirade or the simple truth? Is this 'abuse of the medical institutions of the United States,' or is it the words of soberness and wisdom? We would by no means assert that every man who gets a degree is unqualified;—very far from it. It would be strange, indeed, if there were not many men passing through our colleges, who were abundantly prepared for the duties of their profession: we have already spoken, in sufficiently decided terms, of the high attainments of many members of the profession in this country. We now ask if faith has been kept by all the contracting parties? No matter with whom the fault lies,—whether the pledge has been broken by accident or design,—the question turns upon the fact. What is the fact? In the name of all honesty, all truth, and all justice, what is the fact? Is it not as we have said? We would be the last to advocate a resort to coercive measures. Our motto is, 'peaceably if we can.' It would be better for all parties, that the colleges should, *en masse*, throw up their commissions, and allow legislation to begin anew. We *know* that many of the professors in our schools would willingly accede to this measure. We know also that there are many who are unwilling to forego the advantages of special privilege and rest upon their own merits. With such we have nothing to do, and would have nothing to say. All for which we contend is a fair field and no favor, to all competent teachers. It does seem to us that there is nothing in a desire to seek the aid of accidental advantages, to prop a reputation or influence which cannot stand itself, that comports with manly and honorable feeling. It does seem to us that there is no spirit more thoroughly contemptible than that which leads one to entrench himself within the walls of hereditary or fortuitous privileges.

The direct effect of the plan of reform which we have been advocating, would be that good, sound, thorough, PRACTICAL teachers would have their classes increased. An arena for fair and honorable competition, would be thrown open. All our immense resources for clinical instruction would be brought to bear in elucidating medicine, and the reputation of teachers would be based on the only tenable ground—the efficiency of their teachings. If the test of qualification be rigid, the term of study would, as a necessary consequence, be lengthened, and students, instead of listening to that which is at best but a retailing of the contents of text books, would seek the tuition of those who could impart profitable instruction, and prepare them for honorable usefulness.

We are not the advocates of any scheme of reform which aims at the annihilation of a single one of our colleges. It is quite proper that they should continue in existence. It is of evident utility that bodies of teachers should be enabled to hold property, proper buildings, museums, chemical apparatus, &c.; but the degrees which they confer should never be any other than academic honors. A very able letter, from the pen of Dr. J. R. Manley, appeared in our last number, in which this subject is advocated with the force and perspicuity, which so eminently characterise all the writings of that gentleman. It commended itself, we are sure, to the attentive consideration of all who feel an interest in this great question. An esteemed friend, during a recent visit to a neighboring city, had an opportunity of observing the effect which the agitation of this matter has already produced; and we need hardly express the high gratification we have felt in hearing of the enthusiasm which seems to be almost universally felt for the measures we have advocated. We can assure the profession that there is needed only a little combination in action to carry it through the Legislature. The time has come for action. For once a broad denial appears to be given to the oft-repeated accusation that 'Doctors will quarrel.' In this matter there is no quarreling. There is an unanimity of feeling and opinion which does infinite honor, to the judgment and public spirit of the profession. The signs of the times seem to herald the approach of the season when medicine shall be honored as it deserves to be—and the profession shall carry with it the respect and moral influence which is its due.

The study of practical anatomy, is, it seems, attended with considerable difficulty in Boston, and indeed throughout the State of Massachusetts, in consequence of the inadequate provision for the supply of subjects, and the inefficient administration even of such legal enactments as do exist. The *Boston Medical and Surgical Journal* thus complains of this important evil:—

> 'Here, in Massachusetts, the profession is generally supposed to exist in El Dorado, in respect to anatomical privileges. The Legislature, several years, made ample provision—by allowing a certain description of deceased persons to be given up for the promotion of anatomical knowledge; but it has so happened ever since, that it is much more difficult to procure subjects than it was before. The reason of this is obvious: the dispensing power, unfortunately, in several of the large towns, is lodged in the hands of a narrow minded, obstinate individual, who is determined to make his own ignorance the standard of knowledge. He contemplates the law with absolute horror—and, therefore, instead of offering facilities as he should, and as the framers of the act expected, every possible obstacle is thrown in the way. Dissections are pursued, to be sure, but under embarrassments. Subjects are brought from the cities of other States, where they are procured in violation of the laws, it is presumed, as no liberality worth naming has ever been shown by the resentatives of the people in any of the neighboring States, in regard to practical anatomy. As things now stand, the wonder is that the grave is not frequently violated. And it would not be strange if such a culpable course were occasionally adopted, and the pretence set up that the subject was brought from a distant place, and therefore it was no one's business. It is a common notion that sins committed away from home, lose the heinousness of their character in proportion to the distance of the place where they were committed.
>
> 'A modification of the anatomical law of Massachusetts must either be made, or it must be amended, to answer the original intentions; or such men be appointed to administer it as have common sense, courtesy, and a distinct conception of the importance of anatomical study. At the rate things are now going on, private dissections will by-and-by be wholly impracticable; and yet, without a constant repetition, it is difficult to retain even an elementary acquaintance with the science.'

In New York the supply of subjects is equal to the present demand, but the price is quite too high. Why should not the profession labor to obtain the passage of a law by which the bodies of all persons dying without relations to claim them, should go to the medical schools? This would ensure a sufficient supply, and prevent the exorbitant charges of those who are now engaged in the traffic of the dead.

We must repeat the expression of our regret that no reply has yet been offered to Dr. Manley's celebrated 'Exposition.' The profession and the public have certainly expected a reply. In fact, we do not see how Dr. J. A. Smith and his worthy colleagues, can continue silent. Dr. Manley's charges are serious. They are either true or false. If true, the college should make what reparation they can; if false, let their author be exposed. But we do think, that under all the circumstances, public opinion will not justify the gentlemen who are implicated in this affair, in refusing to make any explanations, offer any defence, or uphold the integrity of their conduct. Come, come, let us have a reply.

What about those 'varicose veins?'

Touching the 'Phenomenon'—does he really intend to lecture next winter?

THE MEDICO-CHIRURGICAL REPORTER.

Cataract of six years' standing successfully treated by Heratonyxis

TO THE EDITOR OF THE LANCET.

DEAR SIR:—

Sarah Corduke, æt. seven years, was blind six years from cataract, and has lately been placed under my care for treatment.

On the 3d of September, ordered a cathartic, and prohibited animal food, preparatory to the operation which I performed on the 5th inst., on the right eye; the instrument which I used was a fine cambric needle; no inflammation followed; operation completely successful.

On the 10th inst., I operated on the left eye; iritis soon followed, but readily yielded to venesection and a few nauseating doses of antim: tart: followed by the prompt administration of calomel and opium, till the system was brought under its influence; this operation was also successful.

Respectfully yours,

JOHN R. DICKSON, M. D.

Kingston, U. C., Sept. 28th, 1842.

Wound of the Antrum of Highmore,

With destruction of the Eye; fragment of Knife-blade removed from the Antrum two years afterwards.

BY W. H. DONNE, M. D., OF LOUISVILLE.

Reported by R. S. Wendel, Student of Medicine.

Schuti, a gardener, aged 42, a native of Germany, in a rencontre with an athletic man, on the 3d of May, 1840. was struck with a dirk-knife, which entered about an inch above the right superciliary arch, passed through the corresponding eyelid, downwards and backwards, evacuating the humors of the eye, and penetrating the antrum. The globe of the eye was divided by a vertical incision, through which the aqueous humor escaped; the iris was extensively detached at the ciliary margin, and could be partially seen through the transparent cornea—its surface being somewhat obscured by small coagula. The hæmorrhage was slight, and easily controlled by moderate pressure. The patient complained of intense pain in the temple and cheek of the wounded side, shooting deep into the orbit. Three points of interrupted suture were used to approximate the edges of the divided eye. Lint saturated with laudanum and warm water, constituted the dressing.

May 4th.—Some tumefaction in the eyelid; pulse 110; tongue coated and dry; skin hot; patient has spent a very restless night. Ordered following medicine:—

℞ Tart: Emet: gr j.
Sulph: Magnes: ℨss.

to be dissolved in one half pint of water, and a tablespoonful to be taken every half hour, until nausea is induced—after which the interval may be increased.

5th.—Bowels freely evacuated; pain less; skin moist; pulse 90 and soft. From this period until the wound healed, a space of three weeks, no constitutional symptoms of an untoward character occurred. The patient, however, contended that a portion of the knife-blade remained in the roof of his mouth. But on the most careful examination no foreign body could be detected.

On the 10th of August, 1842, Mr. Schuti called and requested Dr. Donne to examine his mouth, stating that for six months past he had been annoyed by a rough projecting substance, which some person had informed him was a piece of dead bone, but which he believed to be the point of the knife, that had been driven down into the bone by the violence of the blow. On looking into the mouth a small black speck was discernible about one-half inch from the interval between the first and second molar teeth. The parts adjacent were somewhat tumefied and inflamed. Dr. Donne made several attempts to extract this body with a pair of common dissecting forceps, but found it immovably fixed in the substance of the bone. By dissecting around it with a historry down to the palate process of the superior maxillary bone, he was enabled to get a firmer hold, and with a pair of curved tooth forceps, succeeded in removing a fragment of the blade, 1¼ inches in length, and ¾ of an inch wide at the widest part; the extraction was not affected without considerable violence, and was attended with extreme suffering. The fragment came out with an audible snap, which induced those present to suppose at first that it had been broken; but on inspecting its surfaces closely, they were found similarly oxidised and wanting the lustre which a recent fracture would have presented. Upon probing the aperture through which the fragment had been extracted, no other piece could be detected. This opening would scarcely admit the curved probe which Dr. Donne passed into the antrum, in order to satisfy himself that the whole of the foreign body was removed. The next day there was a slight discharge from the aperture, though the patient has suffered very little pain since the operation.—*Western Jour.*

New Mode of Treating Hydrocele.

BY J. PANCOAST,

Professor of Anatomy, Jefferson Medical College.

Hydrocele in children, even where the opening has been closed, that led from the tunica vaginalis to the cavity of the abdomen, is a disease of frequent occurrence. In early infancy strong discutient lotions will usually suffice for its cure. But after the second year, some more efficient means are required to produce this result. Mere evacuation of the serum with a common lancet or trochar, or a number of punctures made into the sac with a large needle, so that the fluid may escape into the cellular tissue of the scrotum, and be subsequently removed by the absorbents, are the modes of cure commonly relied on. But I have found them so uncertain in their result, success in many cases being attained only by a repetition of the process, that I have latterly adopted the following plan of treatment, which in three cases that I have tried it in has proved perfectly successful.

I puncture the swelling, in front and below its middle, with a common thumb lancet. When the serum is discharged a little pressure causes the serous or vaginal tunic to protrude in the form of a small cyst. This I lay hold of with a pair of forceps, and draw it out, as far as it will admit. I then divide the lower half of the cyst next the skin with a pair of scissors, and traction again being made upon the pedicle, still more of the tunic may be drawn out from the upper portion of the scrotum, which is nipped partly off and treated in like manner as before. I repeat this process, while any portion of the vaginal tunic can be made to readily protrude at the opening, so as to be laid hold of with the forceps. I then surround the side of the scrotum and the testicle involved with strips of adhesive plaster, after the manner of Fricke, of Hamburg, for the cure of hernia humoralis. By this means, the cellular tissue of the scrotum (the tunica vaginalis reflexa having been removed, to a considerable extent, with the forceps and scissors) is brought directly into contact with, and ultimately becomes adherent to that portion of the vaginal tunic which is closely attached to the fibrous coat of the testicle.

The child is allowed to run about as usual, and in a few days is perfectly well. Excepting as regards the puncture of the skin, the operation is entirely devoid of pain.

This plan of cure will, I think, be generally found applicable in children. It is certainly more speedy and certain in its results than any measure short of injection of the sac, which is not usually practised in children.

It would also, I think, be found successful in the recent hydrocele of adults, before the tunica vaginalis reflexa has become so cariaceous, or been so thickened by disease, as to prevent its being drawn out in the form of a cyst through a narrow opening. In one instance, where the puncture or palliative process had been several times tried without success, and in which I feared I might find a thickened membrane, I made the puncture through the skin with a curved bistoury, and pushing it on to the top of the sac, divided with the point of the instrument as I withdrew it, the anterior wall of the tunic, laying open the subcutaneous cellular tissue of the scrotum, but not cutting the skin. Subsequently, no difficulty was encountered in drawing out the tunic and removing it with the scissors.

Since writing the above, I have operated upon another case in the same manner, in which the passage leading to the cavity of the abdomen had remained open. The cure in this instance has been slow and gradual, occupying about a month, and without the aid of a truss. The fluid re-accumulated in the tumor during the first week, but it was gradually absorbed, adhesion beginning below and proceeding upwards, till a radical cure was established.—*American Med. Int.*

Case of Un-united Fracture of the Fore-arm, of four years' standing, successfully treated.

BY CHARLES S. TRIPLER, M. D., SURGEON U. S. ARMY.

Lt. F., of the 5th Regiment of Infantry, 30 years of age, of a scrofulous habit, broke both bones of the left fore-arm, four years ago. Owing to some neglect, union was not effected at the time; and they remained until the 30th of January, 1842, un-united.

Upon examination it appeared, that the radius was broken within two inches of its humeral extremity, and the ulna at one-third of its length from the elbow. The radius was not much displaced, but there was a prominence at the fractured point, as if the superior portion were depressed and thrust under the lower portion. The fractured extremities of the ulna were displaced toward the ulnar edge and back of the radius, forming a large and salient angle at the point of meeting. By extension the bone could be brought nearly into its normal position and plane. The limb was useless except in lifting weights in the direction of its axis. The moment the elbow joint was flexed, the hand became powerless. The fore-arm was shortened nearly three inches.

The false joint in the ulna admitting of the greater degree of motion, I thought it probable, that if I could effect an osseous union in *that* bone the use of the arm would be sufficiently restored for all ordinary purposes. With this view I determined to try pressure as recommended by Brodie, Amesbury, and others. I placed a flat, broad splint upon the palmar face of the fore-arm, and a firm oval pad over the fractured point of the bone. A roller was then nicely adjusted from the fingers to the elbow, over the pad, while extension of the limb was made by an assistant. Additional pressure was made upon the pad, by means of an iron band passing round the arm with a thumb-screw working through it. It required some further contrivance to adjust this band and screw, so as to bring the force in a direction perpendicular to the axis of the ulna.

The pain caused by this apparatus was excessive. The patient declared he could not bear it, and day after day he had it removed in my absence and then rather clumsily reapplied after he had got a little ease. Under these circumstances I could not expect to make a very straight bone, if union was effected at all; nevertheless, I persevered for eleven weeks, and then had the satisfaction to find that a firm union had been accomplished in *that* bone.

It was now discovered that the mobility of the false joint in the radius was such as still to impede, in an important degree, the functions of the organ. The pronator and supinator muscles being inserted into that bone, rotation was of course very imperfect, and the flexibility of the fore-arm at the point of fracture of the radius would hinder the complete ossification of the ulna. It became necessary then by some means to endeavor to produce bony union in the radius. Pressure I thought too tedious and uncertain, nor could I contrive any satisfactory mode of applying it to this bone, under the particular circumstances of the case. The same reasons forbade the use of the seton. I, therefore, after consultation with my friend Dr. Pitcher, late of the Army, determined to expose the radius, and remove the ends of the bone at the point of fracture.

This operation I performed with the assistance of Dr. Pitcher, on the 18th of April, by making an incision about four inches long, through the integuments and fascia over the supinator longus muscle, dissecting down to the bone carefully on the outer side of that muscle, and then removing the fractured extremities of the radius with the trephine.

The operation was rendered painful and tedious, by the difficulty experienced in detaching the pieces of the bone from the interosseous ligament, the wound being very deep and narrow.

The edges of the wound were brought together with adhesive straps, and the arm secured in pasteboard splints and a roller. The next day there was some excitement, and the arm above the elbow was somewhat red and tumified; on the 20th this inflammation was increased, and had assumed distinctly the form of phlegmonous erysipelas. The wound looked perfectly well. In a day or two the diffuse cellular inflammation suppurated, with the usual accompaniments, rigors, burning pains, &c., and was relieved by discharging its pus partly through the wound and partly through a counter opening above the elbow. After this the patient had two attacks of intermittent fever of the tertian type, both of them reproducing the swelling and suppuration of the skin and cellular tissue above the elbow, and retarding the cicatrization of the wound made in the operation. I was fearful these successive suppurations, by keeping the ends of the bones bathed in pus, would prevent the deposit of osseous matter, and defeat the object of the operation. But by constant attention to the general health of the patient, on the 31st of May I had the satisfaction to find that a bony union of the radius was effected; on the 17th of June the external wound was completely cicatrized, and on the 21st the patient was reported for duty.

The arm is now about one inch shorter than the other. The radius is perfectly straight; the ulna is firmly united at a small angle; the motions of pronation and supination are performed very well and are daily improving.

Remarks.—In cases of un-united fracture, three principal methods of procedure are recommended, and all upon high authority; the seton, excision of the fractured extremities of the bone, and forcible apposition maintained for a considerable length of time.

There can be no doubt of the success of each method under favorable circumstances; but when a fracture has remained so long un-united as the case reported, to which method should the surgeon resort?

In this case I tried two of them on two different bones; both succeeded. Excision was successful in spite of several untoward accidents in six weeks. Forcible apposition, without any other disturbing circumstance than the impatience of the patient, was also successful in *eleven* weeks, and was a much more painful operation than the former.

Without extending these remarks any further, I should then say, excision is decidedly preferable. It seems to me there can be no reasonable objection to it. After the operation, the surgeon has a favorable case of compound fracture to treat, without the bruising and laceration of the soft parts, attendant upon that form of injury when it is the result of accident.

The seton in this case would have been inapplicable, from the peculiar form of the fracture—I mean on Dr. Physick's plan. Nor do I think Oppenheim's plan would have been successful, from the great age of the fracture. The only cases I have heard of, treated on this plan, were but of six months' standing, or less.—*Maryland Med. and Sur. Journal.*

Suture of Conjunctiva after Division of Adductor.

BY M. CUNIER.

M. Cunier has addressed a letter to the Academie des Sciences, from which the following is extracted :—'In order to avoid the prominence of the globe of the eye, which almost always takes place in consequence of the fall of the caruncula lacrymalis in the internal angle after division of the adductor, for convergent strabismus, I have used the following means :—By aid of a very fine curved needle, I pass a suture through the two flaps of the conjunctiva. Adhesion takes place on the third day, when I draw the suture away. The thread I use is not waxed. It never produces any sensation, nor the slightest inconvenience. I have used more sutures when the wound was extensive. It is not prudent to retain the edges of the wound in immediate contact, which might cause the strabismus to continue after the operation : the design of the suture is to maintain the caruncula in its place.

When the eye has been drawn outwards after division of the internal rectus, I have succeeded in retaining it exactly in its proper position by means of a suture at the inner canthus.

I have used the suture in more than one hundred cases, and always avoided the deformity of the inner acanthus, justly mentioned as one of the imperfections of the ordinary method of strabotomy.'—*Gazette Medicale.*

THE COLLATERAL SCIENCES.

On the Contractility of the Blood Vessels.

Dr. Heule, of Berlin, endeavors to prove that all congestion of blood in the capillary vessels, and inflammations, are due to a species of paralysis of the coats of the capillary vessels. To prove this fact, he first endeavors to demonstrate that these vessels are possessed of a certain degree of contractility in their normal state, and that they are under the influence of the nervous system, as well as all other parts which contain muscular fibres. He then shows that they possess the same structure as the blood-vessels of greater calibre, and that these last, as well as the solid or hollow muscles, whether of organic or animal life, are composed of the same elements. This analogy of function and of structure, he appears to have proved from the microscopical examination of the muscles, the walls of the capillary vessels, the subcutaneous cellular tissue, and the dartos. The functional differences of these structures, he says, consist in this—that the movements of the solid muscles are subject to the will, and may be determined by mechanical and galvanic irritants, but not by the action of cold; whilst the hollow muscles of organic life are excitable by the same agents as the muscles of animal life, but are incapable of being acted on by the will.

The middle coat of arteries, which has the same structure as the muscles of organic life, cannot be excited by the will; but may by mechanical irritants and by cold, but not by galvanism. If then, says he, the circulation is carried on in the larger vessels with the aid of contractility, which is a function under the influence of the nervous system, the capillaries must act in the same way, as their structure is identical. When the contractility of the capillaries is diminished by paralysis or want of nervous energy, the circulation is badly maintained, and congestions and inflammations are the result.

Dr. Heule states his ideas of the proper division of inflammations and congestions of blood; but they are not to be supported by facts.—*Edin. Med. and Surg. Jour.*

On the Rotary Movements of the Yolk in the Ovum of Mammalia, during its passage through the Fallopian Tube.

BY PROF. J. L. W. BISCHOFF, OF HEIDELBERG.

The attention of Professor Bischoff was called to this phenomenon by an observation of Dr. Martin Barry, in the Philosophical transactions for 1839. Dr. Barry there mentions having on one occasion met with an elliptical vesicle (filled with a transparent fluid in which were small elliptical granules) adherent to the mucous membrane of the Fallopian tube. In the centre of this vesicle was a mulberry-like body which continued rotating on itself for half an hour, the rotation subsiding by degrees into a tremulous motion. Professor Bischoff was of opinion, that this vesicle was an ovum, and the rotating body its yolk, and he adduces an observation in corroboration of this supposition.

Having carefully laid open, with a pair of fine scissors, the Fallopian tubes of a rabbit, which had been placed with a male during the previous eight days, he found four ova close together, about the middle of the tube of the left side. Within the zona pellucida of these ova was the yolk which, however, did not completely occupy its area, but between the yolk and the inner surface of the zona a transparent fluid intervened. In this fluid each yoke-ball continually rotated on its own axis, in the direction from the uterus to the ovary. On examining the ova with a power of eight hundred diameters, the surface of the yolk was seen to be furnished with very minute ciliæ, by the vibration of which this movement was effected. Professor Bischoff convinced himself, by very careful examination, that the ova themselves remained perfectly still during the continuance of this rotatory motion of the yolk, which ceased on the preparation being moistened, in order to prevent the ova from drying up.

In this phenomenon Professor Bischoff sees a fresh point of coincidence between the processes of development in mammalia and in other animals, since similar rotatory movements of the yolk have been observed in the ova of mollusca and polyps, and recently by Von Siebold and Ehrenberg in those of the medusa aurita.—*Lond. and Edin. Month. Jour. of Med. Science.*

ITEMS AND INTELLIGENCE.

Homœopathy.

[In the *Select Medical Library and Bulletin of Medical Science*, for July, there is an excellent and pungent article on Homœopathy, suggested by Dr. C. Neidhard's 'Answer to the Homœopathic Delusions, by Dr. Oliver Wendell Holmes.' We avail ourselves of the following analysis of Dr. Bell's paper, which we find in the last number of the *Maryland Journal*, as we regard the article deserving of extensive circulation, but have not space to give it entire.—Ed. L.]

In speaking of the pathological and therapeutical doctrines of homœopathy, Dr. Bell exhibits the extravagance of the dogma that all chronic diseases arise from syphilis, sycosis, or itch; and points out the folly of abandoning all knowledge of the human frame and all inquiry respecting the suffering organs, for the mere observation of symptoms, which, as in the case of vomiting and sick stomach, may depend upon different organic lesions,—as of the stomach, the brain, the kidneys, or the uterus. He exposes the contradictions and inconsistencies of homœopathical therapeutics, or the doctrine of diseases being cured by medicines which set up similar but stronger diseases in the system, and which diseases, though stronger, so work that they remove inflammation in an organ without inducing severer inflammation. The action of these diseases is more intense than the original disease, and yet, strange to tell, they affect the system so gently that no perceptible operation can be observed! They set up actions in the system more intense than the disorganizing processes of yellow fever, or plague, or cholera, but still they are not only competent to arrest those disorganizations, but they cause none themselves! They are all powerful, but yet all mild! Dr. Bell goes on to contest the plea set up, that all proper curative means ought to act on the diseased frame homœopathically. Disease is not universally cured in this way. The daily practice of the rational school is sometimes to use one, sometimes another class of remedies. The practice of Hahnemann's followers themselves shows that they are not, and cannot be, pure homœopathists. He himself approves of antidotes in cases of poisoning, and thus clearly admits the antipathic principle *contraria contrariis curantur*. So he does also in urgent and dangerous cases, or in diseases that have just broken out in persons who were previously in health. In fact, the basis of the doctrines of the whole school is but a partial truth, the attempt to generalize a few facts, which necessarily leads to numerous contradictions and absurdities. The most notable of these are incorporated with the Hahnemannic pharmacology. Hahnemann recommends doses so small as often to be called infinitesimal; but then, oddly enough, he has discovered, he assures us, that the strength increases with the exiguity of the dose, or the degree of diminution which it undergoes. Agitation or shaking, by increasing the dilution of a medicine, and rubbing by still further attenuating it, develops, he says, most energetically the inherent virtues of remedies, so that he was forced by experience to reduce the number of shakes to two, where he had formerly prescribed ten to each dilution. In a particular case which he records, he prescribed half a drop of the quadrillionth part of a strong drop of the expressed juice of the pulsatilla; which implies a dilution equal to that of the original drop in a hundred barrels of alcohol! And this dose, this half a drop of the solution of a drop of pulsatilla juice in a hundred barrels of alcohol, acted energetically as a remedy! Another of his powerful doses is a drop of the tincture of nux vomica at the decillionth degree of dilution. Now this degree signifies, in homœopathic language, the thirtieth dilution, which, if it could be actually carried out, would, as it has been found by calculation, require a mass of alcohol larger than the whole solar system! A drop of the original tincture diffused through the waters of the Atlantic would form a stronger solution than the eighth degree of dilution; and a drop diffused through all the waters of the globe would be more concentrated than the ninth dilution. It is not surprising that Hahnemann should cease to regard the effects of his medicines as dependent on any material impression, but should believe that matter thus divided becomes, as it were, spiritualized!

It has been urged in favor of these extreme doses, that by their exiguity they find ready entrance into the system, and reach at once the source of the disease, which they combat and drive out. This statement rests on faith without evidence, and those who make it overlook the fact that the globules of the blood and of the tissues are of definite size, and that most medicinal agents introduced into the stomach in the rational practice, and in common doses, manifest their presence in the blood and other fluids, and in different tissues and organs. The living organs allow, after suitable preparation, of the passage through the natural filters, or the several membranes, of particles of a size that would horrify the homœopathist. Nature, of course, is here in error, and Hahnemann comes to rectify her crudeness. With him, medicines of even the decillionth dilution are on certain occasions too gross and potent for the animal economy; and he therefore recommends, and his advice is professedly followed by some of his disciples, that a decillionth division of a drop,—that is, a drop of preparation made by dissolving a drop in a quantity of alcohol greater in mass than the solar system,—be put in a vial, and that this be smelled from time to time, and carefully corked after being used. In this way the vial, he says, will retain its virtues for years!

After this notice of the doctrines and practices of Homœopathy, Dr. Bell takes up the chief portion of Dr. Neidhard's reply to Dr. Holmes, which is devoted to a display of the weight of authority, names, and numbers, in favor of the new system, and to an attempt to palliate the force of the objections against it on the ground of its failure in trials made of it in France and elsewhere.

The democracy of numbers may, perhaps, be entitled to respect in politics; but the crowd can never be admitted as competent judges in questions of medical, ethical, or mathematical science. Not even the merits of Mormonism could be tested by an appeal to such arbiters. One of the peculiarities of the present age, and especially of our own country, is the strong conviction in the mind of every body that he is equal to every thing; and hence the empiricism which prevails throughout the land, from the halls of our national legislature down to the amateur prescribers for ladies' lap-dogs, including quack doctors, and quack priests, and quack lawyers, to say nothing of quack merchants, and quack mechanics, who feel their vocation to be for any and every thing, except that calling to which they were educated, and in which, by common industry, they might be respectable and wealthy.

Dr. Neidhard endeavors to weaken the testimony of MM. Andral and Bailly, whose trials of homœopathy in hospital practice were any thing but encouraging. Yet those trials appear to have been conducted in the fairest possible manner. The medicines were accurately prepared by a homœopathic chemist of Paris, and used with all the precautions as to regimen, &c., recommended by Hahnemann. The trials in Berlin, authorized by the government, and conducted by two of Hannemann's disciples, were entire failures. In Russia, a comparison was made of the rational and homœpathic modes of practice, a distinguished follower of Hahnemann conducting the treatment on his side; the result was eminently to the disadvantage of homœopathy. In another trial, in which patients in equal numbers were subjected to the homœopathic practice on one part, and to low diet and appropriate regimen without any medicine on the other, the result was the same in both cases.

Among the practitioners of homœopathy, Dr. Bell numbers three classes; one consistent, acting out their belief; another who, under the pretence of homœopathic doses, give common but small ones, and those of active and sometimes poisonous articles; and a third who are ready to practice either way, allopathically or homœopathically, paying their own judgment and science the odd compliment of asking their patients how they wish to be treated, and according to the reply, either bleeding them, or giving them a Hahnemann vial to smell, and caring not at all how they earn their fees provided fees come into their pockets.

Respecting the conduct of those ignorant persons in the community who prate in favor of homœopathy, Dr. Bell expresses strongly and justly the natural feelings of a man of science and humanity. Notwithstanding the absurdity of the homœopathic doctrine and practice, a preacher, he says, will be found to neglect his pulpit, a schoolmaster his desk, and a merchant his counting-room or store, to trumpet forth their extraordinary merits. Can we admit the claim of such persons to common sense or to common conscientiousness, or the smallest degree of benevolence, when we find them pertinaciously insist on their fellow men trusting to homœopathy in the hour of sickness, and substituting such a system for the accumulated medical knowledge, experience, and observation of men of genius, industry, and science, during the last two thousand years? Have they no misgiving when almost forcing on a sick friend, who is sometimes weakly and fatally yielding because he is sick, the vagaries of a German enthusiast and mystic, to the exclusion of all the means which for so many ages have been successively accumulated, arranged, and tested for the relief and cure of disease?

These pertinent inquiries are worthy to be maturely pondered, and there are not a few amateur homœopathists in our own city of Baltimore who might be improved both in knowledge and virtue by bestowing upon them a deliberate examination.

Circular.

[It affords us great satisfaction to comply with Dr. Oppenheim's request by inserting the following circular.]

The frightful conflagration which visited Hamburg in the beginning of last May has not spared the premises of the Medical Union, whose library, the fruit of twenty-six years' assiduous collection, exists no more! Such a loss cannot be repaired by pecuniary contributions. Complete series of a great number of German, French, English, American, and Indian journals and works, rare editions of the older authors, a multitude of ancient and modern medical and chirurgical encyclopædias and lexicons in various languages, scarce and curious prints, &c., are not only lost, but are no longer procurable by purchase; while many hundred volumes of old dissertations, classified according to subjects, cannot be replaced in any manner. In this strait the Medical Union earnestly requests advice, not only from its foreign members, but from all its medical brethren, where and in what manner it may once more gradually acquire possession of a library at the least possible expenditure of money. Any communication on this subject, in post paid letters or through the medium of the booksellers, addressed to 'The Directors of the Hamburg Medical Union,' or to the undersigned, will be received with the sincerest thanks. The editors of the medical journals are requested kindly to give insertion to this notice in their respective publications.

F. W. Oppenheim, M. D.

Hamburg, May 16th, 1842.

President of the College of Physicians and Surgeons in the City of New York.

The *Boston Medical and Surgical Journal* makes the following reference to Dr. Manley's 'Exposition':—

James R. Manley, M. D., late lecturer on Obstetrics in the above school, has sent forth a pamphlet of forty-eight octavo pages, to show that a deceitful, double-dealing, unprincipled functionary now stands at the head of the institution. We have a faint recollection of some sort of book that emanated from the president, who is also professor of physiology, within the last few years. It was a still-born production, however, having never manifested the least sign of vitality. Dr. Manley appears to have been ungenerously treated; and it is clearly proved that from some undivulged cause, a malign influence was exerted by the president, to his prejudice. Having no acquaintance with either of them, our sympathies are naturally enlisted on the side of the oppressed. An answer will be coming along, it is presumed, to counteract the effects of this exposition upon the fame, name, and official standing of the president; but he cannot successfully, it is apprehended, rebut Dr. Manley's declarations. Why not let Dr. Manley alone? Was not the world large enough for both to breathe in at once? Those active, intelligent, talented gentlemen who compose the present faculty of the College, understand their position—they will define it, too, by-and-bye—and then, even that book cannot save the president.

Professor Shotwell, of Cincinnati, has just arrived in our city on his return from Europe, having in his possession numerous models, preparations, &c. destined for the use of that excellent school with which he is connected.

Lewis A. Sayre, M. D., has been appointed Prosector in Surgery in the College of Physicians and Surgeons, in this city.

Books, &c. Received.

The History, Diagnosis, and Treatment of Typhoid and Typhus Fever; with an Essay on the Diagnosis of Bilious Remittent and of Yellow Fever. By Elisha Bartlett, M. D., Professor of the Theory and Practice of Medicine in Transylvania University. Philadelphia: Lea & Blanchard. 1842. 1 vol. 8vo. pp. 393.

[Notice in our next.]

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Oct. 1, 1842.

35 Men, 33 Women, 58 Boys, 40 Girls. Total, 166.

DISEASES.

Apoplexy	2	Intemperance	1
Asthma	0	Inflammation	1
Asphyxia	0	Of liver	5
Abscess	2	Of bladder	0
Abortion	0	Of brain	3
Bleeding	1	Of stomach	0
Bleeding from stomach	0	Of throat	1
Bleeding from uterus	0	Of lungs	4
Burned or scalded	1	Of bowels	6
Cachexia	3	Of heart	1
Cholera infantum	19	Of bladder	1
Cholera morbus	0	Insanity	1
Congestion of the Brain	1	Jaundice	0
Consumption	34	Killed by fighting	0
Convulsions	8	Lues Venera	2
Croup or hives	2	Mortification	0
Cancer	0	Malformation	1
Debility	2	Marasmus	8
Delirium tremens	0	Measles	0
Diarrhœa	2	Old age	0
Death from poison	0	Organic disease of heart	0
Dropsy	1	Palsy	1
Dropsy in head	6	Retention of urine	0
Dropsy in the chest	1	Rheumatism	0
Drowned	0	Spinal disease	0
Dysentery	6	Suicide	1
Erysipelas	0	Sprue	0
Eruption	1	Small-pox	1
Fever	2	Tumor	1
Scarlet	6	Teething	2
Typhoid	1	Ulceration of intestines	0
Nervous	4	Unknown	0
Remittent	0	Ulceration of throat	0
Billious	4	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	2	Whooping cough	5
Hip Disease	0	Worms	0

John H. Griscom, City Inspector.

City Inspector's Office, Oct. 3, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, OCTOBER 15, 1842. No. 16.

REVIEW DEPARTMENT.

Report of a Committee of the Medical Society of the State of New York, on the subject of Medical Education. Albany: Printed by J. Munsell, 58 State street. 1840. pp. 22.

[To an influential member of the profession in this city, whose hearty approbation of our humble labors in the cause of Medical Reform, has afforded us much encouragement, we are indebted for a copy of this 'Report.' As every thing relating to the all important subject of medical education possesses at present undeniable claims on the attention of the profession, we have determined to extract the most practical portions of the document before us. After some historical details respecting various enactments relative to the regulation of the practice of the medical profession, the 'Report' presents the following suggestions for the improvement of medical education.]

1. Preliminary Education.—The only inducement held out to the student of medicine, in order to acquire a proper preliminary education, is this: If he when above the age of sixteen, has attended to the studies usually pursued in our colleges, for the space of a year, that space of time may be deducted from his four years term of study. But in the same section, the same deduction is allowed if he has attended a full course of lectures; and it is expressly ordained that in no case shall the deduction exceed one year. Thus it is no matter whether the student has fulfilled both demands or only a single one, as to his time. The Committee do not complain of this; the time of study is not by any means too long. It should rather with reference to the above requisitions be lengthened.

Let us for a moment ascertain what is the amount of preliminary education required in the other liberal professions. Among the clergy, we know that there is no statute law, but in each denomination its internal regulations are of binding force. Now it is well understood that in most of these no student is admitted to the study of theology, unless he has completed a collegiate education, or in lieu thereof undergoes an examination on the studies usually pursued in such institutions. The exceptions to this are not sufficient to invalidate the general rule, and we know that those religious sects which have been the latest in pursuing the study of the higher branches of learning, are now making up for their lost time by the rapid and wide establishment of colleges and academies under their own direction. It cannot then be denied but that the clergy are educated men, and that the regulations of their ecclesiastical bodies act on the students with the force of law—requiring of them four years of preliminary preparation before they enter on the study of theology.

How is it with the legal profession? Here the chancellor, and the judges of the supreme court have the power given them by law to prescribe the course of study. The requisites are identical in both courts, and as those of the supreme court are the most minute, we shall give them in detail, particularly as we shall need to refer to them on other points.

'No person shall be permitted to practice as an attorney or counsellor of this court, without a regular admission and license; and in order to obtain such admission and license he must be examined under the direction of this court. No person shall be admitted to an examination as an attorney, unless he shall have served a regular clerkship of seven years in the office of a practising attorney of this court; but if he has regularly pursued classical studies for four years, or any shorter period after the age of fourteen, it may be allowed in lieu of an equal time of clerkship. The extent of such allowance, must at the commencement of the clerkship be ascertained and settled by one of the clerks of the court by an order to be signed by him.

The evidence of such classical studies shall be, 1. A diploma conferring the degree of Bachelor of Arts by some incorporated college, or a certificate of the president of said college. 2. If neither can be produced, an affidavit of the teacher or teachers with whom the student has pursued his studies, stating the time spent and the studies pursued, with a specification of the books used; or 3. If the teacher be dead or absent from the country, so that his affidavit cannot be obtained, then the affidavit of the student himself stating such death or absence, and also the time spent with his teacher or teachers, and the books studied by him under each teacher. When the person applying for an order to allow classical studies has no diploma or certificate, an affidavit shall also be produced, stating the qualifications of the teacher or teachers.

Time spent in classical study without the aid of a competent teacher, or time spent in those studies which are taught in common schools, and compose an ordinary English education, including English grammar, arithmetic and geography, will not be allowed. And in every case it must be shown by affidavit, that the studies were pursued after the person applying attained the age of fourteen years. The clerk shall file in his office the papers on which the application is founded, unless it be founded on a diploma. In such case he shall state, in his order of allowance, that such diploma was produced to him.

It shall be the duty of the attorney with whom the clerkship shall be commenced, to file a certificate in the office of one of the clerks of this court, certifying that the person has commenced a clerkship with him; and if an order has been obtained, as above mentioned, allowing a shorter term than seven years for such clerkship, the same shall be filed with such certificate, and the clerkship shall be deemed to have commenced on the day of the filing of the certificate.'

Lastly. 'It shall also be the duty of the attorney to give to a clerk, when he shall leave his office, a certificate stating his moral character, the term of clerkship which he has passed with him, and the periods which have been allowed him for vacations; it being understood that not more than three months shall be allowed for vacations in any year.' (Rules and orders of the Supreme Court of the State of New York, January term, 1837.)

Can any reason be assigned why the requisites for entering on the study of medicine should be so decidedly less than those of the other professions? A knowledge of the learned languages is certainly quite as important. They furnish in a great degree the nomenclature of our medical works. These are filled with words derived from the Latin and Greek—words which when understood become the representative of ideas that require long and copious definitions in English. Again, would it not be a great advantage to the pupil to acquire early a knowledge of the elements of chemistry? The study enters even into our system of academical education; and the boy at fourteen or fifteen often knows more of it than the student at eighteen, commencing his studies. But above all, provision should be made for the acquisition of the English language, so that it can be written with accuracy and fluency.

Certainly the importance of a well educated profession cannot be too highly appreciated. A late French traveller has styled the legal profession the aristocracy of this country. It is undoubtedly the direct avenue to office and power. But although the law may have some advantages peculiar to itself, yet the main cause of its exaltation unquestionably is, that its members are obliged to be far better educated than a vast majority of the community.

If these views are correct, should we not make an effort at assimilating our profession to the others? The desired object may be readily attained by requiring the study of medicine to be determined upon at the age, say of sixteen, and allowing two years of this to be devoted to classical studies, or the higher branches of English studies equivalent to them. And in order that no complaint of surprise may be made, let it be enacted that the requisition shall not go into effect until the 1st of May, 1842; so that all who are about commencing the study may have due notice.

2. Age.—On this point the law is precise. No person can practise physic and surgery until he has arrived at the age of twenty-one; and it thus affects all, whether they receive licenses or diplomas. If the enactment be proper, and none will deny this, then it ought to be strictly enforced. And the only question is, how the age of the individual is to be ascertained. In cases where an applicant is known personally, as for example, when examined before a county medical society, there is little danger of deception in this respect. But when the candidate presents himself before the censors of the State Medical Society, or before any of the medical colleges, the fact has frequently to be learnt either from the statement of the individual himself, or the certificate of his relatives or preceptor. In either case fraud may be committed, not frequently perhaps, but it is charged to have been done. Apart from the immorality of such conduct, young men can scarcely be aware how little is gained by entering too early on the practice of the profession. No one ever regretted that he waited even years beyond his majority. Many have abundant cause of sorrow that they commenced too soon.

But if the present mode of proof be too loose—if it is not uniform—if it allows of collusion, certainly regulations can be made to obviate this, and none appears preferable to requiring an affidavit either from the individual applying, or from his parents, or his preceptor, stating that he has attained the necessary age. This is demanded from the student himself, when entering on the profession of law, and certainly therefore cannot be complained of, when extended to our own.

3. Term of Study.—Here also the law is precise, and its directions specific. The physician with whom a student commences his study shall file a certificate to that effect with the president of the county medical society—the president at the same time making the necessary deduction for time if required—and the term of study commences from the day of filing. Now if the teacher complies with this requisition, no difficulty can occur as to the commencement of the period of study. But in 1828, a case came up before the legislature, in which this had been neglected, and the student having studied his full term, prayed for relief. The committee of the senate, to whom the subject was referred, were of opinion that the omission should not deprive the student of his right to an examination; and they intimate that an affidavit stating the neglect, and that notwithstanding the other requirements of the law have been complied with, would be sufficient. (Transactions, vol. 1, Appendix, p. 37.)

This construction has been readily adopted, and the consequence, it is believed, is a laxity in filing certificates. There are indeed several objections to the course now pursued. The president may reside in a remote part of the county—frequently he does not hold the office for more than a year, and possibly he may not be very careful in transferring these certificates to his successor. Would it not be preferable to have these certificates authenticated by the county clerk in each instance, and then filed in his office? Public and private convenience would thus doubtless be promoted; and as the county town is always much frequented, no difficulty or delay can occur in procuring copies. Having arranged as to the commencement of the term of study, the fact of its proper completion can readily be ascertained by a compliance with a resolution of this Society, passed February 3d, 1836, in the following words:—

Resolved, That no medical student shall be received for examination by the censors of the state or county medical societies, until he shall have furnished certificates of having studied the full time prescribed by law, authenticated by the affidavit of his preceptor or preceptors, or in its absence, by his own affidavit.

4. Attendance on a Course of Lectures.—At the date last named, the State Medical Society also passed the following resolution:—

Resolved, That when a student has attended lectures he furnish a certificate from the college in which he has attended, that he has attended a full course, or if not a full course, the extent of his attendance; and that his attendance has been regular, and his conduct and character as a student proper and respectable. (Trausactions, vol. 3d, Appendix, p. 12.)

The exhibition of this certificate should be required by the censors of both the state and the county medical societies, and it is to be hoped that all our medical colleges in this state will bestow such certificates on their students at the conclusion of each term. They answer a most useful purpose—promoting correctness of conduct and securing a regular attendance on the lectures. Every inducement that we can thus hold out to industry and morality will redound to the welfare of the profession.

5. Examination and Aomission to Practice.—There are, we believe, fifty-eight counties in the state. In upwards of forty, and probably nearly fifty of these, there are medical societies, each having boards of censors. There are four boards of censors attached to the State Medical Society, and four medical colleges with their professors authorised to examine. Thus there are at the very least, fifteen bodies of men in the state authorised to permit an individual to practice physic and surgery. It will not be denied but that some diversity may exist in the character of the examinations, as tests of the qualifications of applicants, and such an opinion has led to many propositions for a change. The one that has most frequently been broached in this society, is that of taking away the

power of licensing from county censors, and giving it exclusively to the state censors. There are several objections to such a proceeding. It may justly be apprehended that it would lead to the dissolution of many county medical societies, and thus gradually tend to the destruction of that system which, on the whole, has been of great benefit to the profession. Several of the societies promote the cause of medical knowledge, by appropriating the avails from examinations to the purchase of a library; and others use it for the unavoidable contingent expenses. But it is hardly necessary to discuss this point, as the committee have reason to believe that the plan in question would meet with opposition quite sufficient to insure its rejection. They will, however, suggest as a substitute, the formation of district medical societies, corresponding in geographical extent to the existing senatorial districts. If a large board of censors were appointed for each of these, and required to meet, say quarterly, at different places within the district for the examination of students, and if together with this, provision be made for dividing the examination fees among the county medical societies within the district, probably the mode of examining would be as unexceptionable as we can expect to make it. In order to satisfy any further objections, the election of censors might be committed to the physicians residing within the district, or to the nomination of the county societies. And should such a plan ever go into effect, it might be well to annex the provision now in force with the board of examiners in Upper Canada, viz: that every censor absent from his post at the appointed time, shall pay a fine.

The examination of students for the degree of Doctor of Medicine is a still more vexed point. It is a matter of regret that so many young men at the entrance of their professional life, are pressing for this distinction. The experience of many has shown the value of practising for a few years with a license, and then returning with a store of self-acquired knowledge for the degree. But regret is all we can offer; it is in a measure caused by the rapid increase of our medical schools, but above all is it owing to our national characteristics. The go-ahead system enters into all the occupations of life, and the young man in and out of the professions is not satisfied until he has got as high at least as his neighbor.

But in view of the degree becoming depreciated by the rapid establishment of new medical schools, IT MAY WELL BECOME A QUESTION DESERVING SERIOUS CONSIDERATION, WHETHER AT NO DISTANT PERIOD, THE RIGHT OF TEACHING AND LICENSING SHOULD NOT BE DISJOINED. In London, this experiment is now in progress; at the University of London, students from the University College, and King's College medical schools, from the London Hospital schools, and from several of the provincial medical colleges, are examined by persons appointed by the university, and this university has the power given to it by government of granting degrees; and this to the exclusion of the above teaching bodies. Time will show whether the result will be more beneficial than the old plan.

An incidental difficulty to the adoption of this suggestion is the fact that we are surrounded by institutions in other states, who might or might not follow it, and thus our students might be induced to desert our own colleges. This, however, will be of little importance if the increase of medical schools for the next five years should correspond to those just elapsed.

In concluding this review of the subject of medical education, the Committee are far from expecting that all or most of their ideas will meet with the general approbation of the society. They submit them for consideration, for reflection, for discussion. And they may at least be pardoned in the conclusion for a single remark; it is this: Before any alteration in the laws be applied for by this society, let it be well understood, that a majority of the profession acquiesce in its propriety. And when once we are satisfied of this, let us not be deterred by the usual cant of legislative opposition to a regular medical profession, from requiring its passage. This can at any time be effected by proper explanations to the members of both houses before they leave their homes; and it is in this way alone, that real improvements can be introduced. True there will always be some who are opposed to any thing that looks like improving other professions—some antipodes of a William Van Ness or a De Witt Clinton—some demagogue who comes into the house a flaming patriot, and leaves it a bank attorney. Such men have an instinctive dislike to the increase of knowledge and moral power in the medical profession. But if we ask only for what is right, and what can be shown will conduce to the general good, we need not fear the event.

[It will be perceived from one of the concluding paragraphs of this somewhat lengthened quotation, that the propriety of dissevering the teaching from the licensing power was foreseen as good policy, even at the period when the 'Report' was made. Every subsequent year has added strength to this view, and who is there now who can successfully contend against the accumulated evidence in favor of this first great change in the present defective system?]

Medicinische Statistik der innerlichen Abtheilung des Catharinen-Hospitales zu Stuttgart, in seinem ersten Decennium, 1828–1838. Von Dr. Georg Cless. Mit einer Lithographie und sieben Tabellen. Stuttgart: Verlag von Ebner & Seubert, 1841.

Medical Statistics of the Interior Division of the Catharine Hospital at Stuttgart, during its first decennium, 1828–1838. By Dr. George Cless. With one lithograph and seven tables. Stuttgart: Ebner & Seubert. 1841. 4to. pp. 96.

[The following very interesting article was contributed to the last number of *Hays's Journal*, by our esteemed friend Dr. Forry; and we are sure our readers will not be dissatisfied with us for transferring it to our columns.—Ed. L.]

The Catharine Hospital at Stuttgart is so called from the circumstance of being dedicated to Queen Catharine. The edifice was commenced in 1820, and completed in 1827. The institution is divided into an Hospital and a Lying-in establishment, there being connected with the latter an obstetrical school. The Hospital itself is divided into the internal and the surgical departments, each being under distinct medical control. The inner division, to which belong all cases of chronic cutaneous eruptions, of syphilitic diseases, and of ophthalmic surgery, has 21 rooms and 132 beds; but in case of emergency, 150 patients can be very easily accommodated. Children under eight years of age, and all laboring under mental diseases, are, by a regulation of the institution, excluded from its walls. In cases which prove incurable, the patient is generally allowed to remain three months in the hospital, when he is sent either to his native place, or to the city infirmary devoted to the incurable and superannuated. A claim to admittance into this Hospital is possessed by all servants, journeymen, and other laborers of the town, who have made themselves liable for the payment of a yearly sum, each to what may be called his own beneficial society. Further, all the poor who are natives of Stuttgart, as well as all poor foreigners, whether natives of Stuttgart or merely travelling through it, are entitled to the benefits of the Hospital free of expense. The Catharine Hospital was opened on the 9th of January, 1828; and ever since its establishment Dr. Cless, the father of the author, has been the physician to the inner division. Accurate tables are kept of all cases admitted, in which are recorded the name, age, condition, place of nativity, and the period of admission and discharge of every patient; and at the end of every year, an annual report in detail is presented.

Medical statistics, it is truly remarked by Dr. Cless, can be successfully cultivated only within hospitals; and he adds, with equal truth, that it is a matter of special wonder to see how very few have availed themselves of these advantages. If we except the statistics furnished by military hospitals, the contributions to medical science from this mode of investigating diseases is limited indeed.

We will now endeavor to present the principal results of the author, confining ourselves to points of general interest. Following the division of the subject adopted by Dr. Cless, we will first bring under notice the sum total of the admissions during the ten years. These amount to 12,431, of which 6,414 were males, and 6,017 females. It may be worthy of remark, that the annual totals exhibit a gradual increase, with the exception of the year 1836–7, which gives the maximum in consequence of the prevalence of the '*Grippe-Epidemie.*' This gradual increase speaks much in favor of the good management of the institution, a conclusion corroborated by the fact that whilst in the first year the proportion of males to females was nearly as 3 to 1, the ratio in subsequent years gradually attained an equality.

The number of days of sickness for each admission averages nearly twenty-four, it being in the earlier years of the establishment of the hospital from 22 to 25 days, but in more recent ones only 18 to 21. This reduction the author ascribes to an improved mode of treating scabies, a disease which was at all times very prevalent in the hospital.

The fifth chapter treats of the relative monthly morbility and the influence of the seasons in the production of diseases. The monthly morbility, on an average of thirty days, stands thus:—

Jan.	1091	April	1706	July	1063	Oct.	856
Feb.	1105	May	1007	Aug.	1040	Nov.	984
Mar.	1154	June	1142	Sept.	858	Dec.	855

It thus appears that we find the maximum of disease in March, followed in the descending scale by June, February, and January. The minimum occurs in December, followed in the ascending scale by October, September, and November. These monthly results, however, are considerably modified, if those years in which epidemics prevailed are excluded from the calculation. Thus, if the year 1835, when a mucous fever epidemic (*Schleim fieber epidemie*) prevailed in September and October, is thrown out, the mean morbility of these two months will be lower than that of December. In like manner, as the '*Grippe-Epidemie*' prevailed very extensively in March, 1837, the exclusion of this year would place that month, which is the maximum, below January, February, and June.

As regards the relative influence of the seasons, assuming autumn as 100, winter gives 112, and spring and summer each 120. In this division of the seasons, December is the first winter month; but by changing it so as to commence the winter with January, the result is so much modified that winter becomes the most insalubrious season. The morbility of autumn being represented by 100, that of summer is equal to 110, that of spring 117, and that of winter 122. Making three divisions of the year, the first, (January to April,) has 4,441 cases; the second, (May to August,) 4,324; and the third, (September to December,) 3,609. Lastly, in a division of six months, the first give 6,593 cases, and the last six, 5,781.

As respects the relative mortality of the seasons as deduced from the data afforded by the Catharine Hospital, we find the season of summer the most salubrious. The ratios are as follows:—

Winter, (December to February,).........	108
Spring, (March to May,).................	103
Summer, (June to August,)...............	86
Autumn, (September to November.)......	123

This result, so far as the summer is concerned, is confirmed by the data furnished by the church register of Stuttgart during the same period of ten years, the relative salubrity of the seasons having the following order—summer, autumn, winter, and spring. The statistics of deaths among the adult population of Berlin give results somewhat similar, summer being the most healthy season, and winter the least salubrious. From July, 1832, to July, 1838, the results are as under:—

Winter, (December to February,).......	6,735
Spring, (March to May,)...............	6,152
Summer, (June to August,).............	5,080
Autumn, (September to December,)......	6,151

We have been the more particular in giving these results, in order to be enabled to institute several comparisons. We find that the order of salubrity, as regards the seasons, corresponds very nearly with that of London, at the present day, as determined by the 'registrar-general of births, deaths, and marriages,' the relative unhealthiness of the seasons standing thus—winter, spring, autumn, summer. But the higher or lower ratio of the seasons in different regions would seem to have an inseparable relation with malarial causes. As the diseases regarded as of malarial origin are dominant in southern Europe, so we find the relative salubrity of the seasons, according to the rule laid down by the Greek and Roman authorities, nearly the reverse of that of London, and of the Catharine Hospital at Stuttgart. The aphorism of Celsus runs thus—*saluberrimum ver est, proxime deinde ab hoc, hiems, periculosior aestas, autumnus periculossimus.* In the United States, these laws, according to the army statistics, are modified in accordance with the prevalence of malarial diseases. Thus in the northern States, the mortality of the winter months is generally equal to that of the summer; whilst in the middle and southern States, the lowest ratio is in April, from which month it gradually increases until September, (the difference being as 3 to 8,) and then it decreases in the same unvarying gradation until the reappearance of April. Even in our northern cities, as Boston, New York, and Philadelphia, the same law holds good; but these effects, except in cities and localities decidedly malarious, are not manifested in the mortality of our northeren regions, owing to the circumstance that the diseases developed by malarious causes, such as intermittent fever, unlike the violent remittents of the south, do not exert a fatal tendency. At the posts in the malarial region of the great Lakes, the ratio of mortality is always highest during the summer, whilst at those on the coast of New England, which is exempt from malarial causes, there is little difference in the ratio of cases reported each quarter, the winter being often the most insalubrious season. At Fort Gibson, on the contrary, the ratio of sickness is twice as high in summer as in winter. It is thus seen, that under the same laws of temperature, very diverse results may be presented; for to the agricultural inhabitants of a non-malarial soil, or to the residents of a city equally favorably situated, winter may prove the most unhealthy season, whilst in marshy districts or cities abounding in dead organic matter, summer will be the most insalubrious.

The author has favored us with no topographical description of Stuttgart; but we are warranted in the opinion that the locality is but slightly malarious, from the circumstance that summer is the most healthy season, and winter the most unhealthy. Moreover, the general table of diseases shows the comparative infrequency of those usually regarded as of malarious origin. Thus of intermittent fever, there are reported only 266 cases during the ten years; and of these, 111 occurred in the spring. Besides, more than one half of these cases were not of domestic origin. Of remittent fever, no cases are registered; but of 'febris biliosa,' there are 211, and of dysenteria only 142.

Of the admissions into the Catharine Hospital, one out of every 29 46·100 died. A large proportion of the diseases which occur, however, are such as are seldom or never fatal. Among a total of 12,431 cases, for example, there are, 2,434 of scabies. The average of one death in 29 admissions is, however, a very low ratio when compared with the other hospitals of Europe. Thus, in London, the average of St. Thomas' Hospital is one in sixteen, and of St. George's Hospital, one in nine. At Edinburgh, the ratio is one in sixteen; and among thirteen hospitals in Paris, it varies from one in 5 5-10 to one in 33. At Amsterdam, it is one in 10; at Pavia, one in 11; at Bologna, (Tomassini's Clinique,) one in 8; at Palermo, one in 8; at Berlin, one in 6; at several hospitals in Russia, it varies from one in 9 to one in 10; and among eight of these institutions in Germany, the highest average is one in 6, and the lowest, one in 25.

The next subject brought under notice is the influence of different avocations on health and mortality. This investigation is conducted after the manner of Dr. Fuchs, of Würzburg, whose researches embrace the period from 1786 to 1834. The subjects of this branch of the statistics of Dr. Cless consist wholly of apprentices and journeymen; and as the former make up the great mass, the influence of trades upon health and mortality is the more happily illustrated. As connected with this subject, Dr. Cless has arranged in a tabular form the following data:—In column first is exhibited the total of each craft who have the privilege of this hospital, in consideration of a periodical contribution; in column second is given the total of the admissions of each trade; in the third the deaths of each; in the fourth and fifth, the ratio of morbility and of mortality in reference to the totals of the first column; and in the sixth column, the mortality relative to the number of each trade admitted.

The total of these periodical contributors is 18,437, of whom 5,095 were admitted as patients, and 153 died. The ratio of mortality to the admission is hence 1 in 33 3-10.

It would be interesting to pursue the author in his details relative to each trade; but we must content ourselves with some general remarks. Dr. Cless's results fully confirm the subjoined conclusion of Dr. Fuchs:—'Trades that require much confinement within doors are universally unhealthy; whilst such as demand a frequent change between the house and the open air, are most conducive to the maintenance of health. Amongst those whose occupation is continually in the open air, the lowest degree of morbility is presented; but it is with these trades, on the other hand, that the mortality is highest. This immunity of the last against ordinary sickness is ascribable to their being inured to atmospheric changes, whilst the high mortality arises from the same causes when acting with much intensity.' This illustrates the different influence of trades, as regards their locality. Thus amongst those working in the open air are included carpenters, masons, stone-cutters, etc. Amongst those constantly confined within doors, are printers, book-binders, turners, dyers, tinners, potters, hatters, workers in gold and silver, button-makers, tailors, saddlers, weavers, etc. And those trades that partake of the character of both are tanners, glaziers, chimney-sweepers, coopers, butchers, blacksmiths, rope-makers, and wheelwrights.

In reference to temperature and moisture, a like difference is observable. A warm and a moist atmosphere operates in the most friendly manner upon the system of the workman; but a cold and damp air exercises an opposite tendency. Those that labor in a hot and dry atmosphere have a higher ratio of sickness than under ordinary atmospheric circumstances, but these diseases are less fatal. These results are also in confirmation of those of Fuchs. Those tradesmen that work in a dry and warm atmosphere, characterized by a high morbility and a low mortality, are the several kinds of smiths, as coppersmiths, cutlers, nail-smiths, locksmiths, instrument-makers, workers in gold and silver, &c. The operatives that work in a warm and moist atmosphere, having both a low morbility and mortality, are bakers, brewers, soap-boilers, &c. Those whose occupation confines them to a cold and damp atmosphere, the agency of which is very detrimental, are weavers, printers, &c.; but the term *cold* is here not used in an absolute sense, but as relative to the preceding class of trades.

The next results show the influence of different trades upon health and mortality, arising from the materials with which the workmen are engaged. These are divided into dust, vapors, and emanations. Thus stone-cutters, masons and smiths live in an atmosphere filled with mineral particles; bakers, chimney-sweepers, and rope-makers, in one with vegetable particles; and saddlers, furriers and hatters breathe an atmosphere rife with animal particles. But these foreign substances, if we except those that have a mineral origin, seem to exercise no unfavorable influence upon the human constitution. This investigation is continued in reference to mineral vapors, and emanations of animal, vegetable, and metallic origin.

Lastly, the results presented elucidate the influence of different trades in reference to the demand made upon man's physical powers. These authorize the conclusion, though not entirely confirmed by the extensive researches of Fuchs, that the most laborious trades are the most healthful, but that the cases which occur among this class are more fatal than among those trades which require less exercise of man's strength.

If we divide the various trades into three classes, the first, or the most healthful, comprise the following in the order of their position:—Workers in gold and silver, butchers, bakers, blacksmiths, and book-binders. The second class, or those of medium healthfulness, is the following:—Carpenters, glaziers, wheelwrights, tailors, coopers, saddlers, tanners, locksmiths, and weavers. The third class, or those which prove most injurious to the constitution, are masons, stone-cutters, printers, coopers, instrument-makers, (mechanical and optical,) shoemakers, and joiners. The injurious tendency of the last two trades, which show the highest ratio of morbility and mortality, are attributable to the circumstance that these operatives are wholly confined within doors, besides being sedentary and constantly in a doubled-up position.

In the fourteenth chapter, the author treats of the morbid diatheses, (*Krankheits constitutionem*,) which prevailed during the decennium. By morbid diathesis is meant the prevalence of a particular disease, or a class of diseases. The most prevalent is the *gastric* diathesis, which appeared every year with the ingress of spring, and continued until the beginning of winter. Nearly half the cases of fever reported are under the name of 'febris gastrica;' and these prevailed mostly during the warmer months. Next come the *nervous*, the *bilious erysipelatous*, the *choleric*, and the *dysenteric* diatheses. The *inflammatory* diathesis appeared every year at the period of the lowest winter temperature; and the degree of its intensity, and the time of its continuance always bore a close relation to the intensity and continuance of cold weather. Between the period of the *inflammatory* diathesis of winter, and the *gastric-bilious* of summer, both in the spring and fall, the *catarrhal* and *rheumatic* diatheses prevailed.

The fifteenth chapter is devoted to the epidemics which prevailed during the ten years. They are the following:—

1830—Autumn—Scarlet Fever.
1831—Summer—Influenza or Grippe.
1833—Spring—Rubeola and Influenza.
1834—Summer—Cholera and Dysentery.
1835—Autumn—Mucous Fever.
1836—Summer—Dysentery.
1837—Spring—Influenza or Grippe.
1837—Autumn—Rubeola.
1838—Spring—Autumn.

Of these eleven epidemics, not a single one occurred in the season of winter. Of the three epidemics of influenza or the grippe, it was only in the last that any cases proved fatal in the Hospital, nine having died from the supervention of inflammation of the lungs.

In the last space are presented the statistics of special diseases.

Under the head of *fever*, our author condenses all the cases reported under the names of bilious, gastric, mucous, and nervous fevers, regarding them all as merely modifications of the same morbid process, arising from difference in the intensity of the cause, and from peculiarity of constitution. Under the same category, he even includes typhus fever, the dothinenteritis of the French. The cases of fever make up more than one-seventh of all the diseases reported, and the mortality from this cause constitutes more than one-fourth of the aggregate of deaths. Every fatal febrile case arose from typhus, there being 118 deaths among 461 patients. As regards the relative influence of the seasons, we find that the highest ratio of cases of each form of fever, with the exception of typhus, is presented in the summer; but, contrary to what might be expected, the average of typhus in winter is the lowest. The ratio of cases of typhus stands thus:—spring 107, summer 99, autumn 160, and winter 93.

After treating seven other forms of disease, our author takes up the subject of intermittent fever, intimating very plainly by giving it a position between small-pox and chlorosis, that he did not regard it as possessing a single analogy in common with the forms of fever just brought under notice. Of this disease only 266 cases are reported; and of these, more than one-half were contracted in localities remote from Stuttgart. It was only in one year of the decennium, (1835,) that intermitting fever evidenced a decided endemic character. Of remittent fever, no cases were registered.

The results of pleuritis, pneumonia, and catarrhal fever, show that these diseases are much under the influence of the seasons. Thus:—

	Winter.	*Spring.*	*Summer.*	*Autumn.*
Catarrhal Fever,	248	201	62	114
Pneumonia,	190	145	55	56
Pleuritis,	156	120	137	84
Total,	594	475	254	254

These results are in conformity with those furnished by the statistics of the United States Army; and this fact in connection with several others, completely exposes the fallacy of the conclusion deducted from the British army statistics, that pulmonary diseases are uninfluenced by the laws of temperature pertaining to different climates. The universal opinions in regard to the advantages of change of climate in certain forms of pulmonary affections, maintained since the days of Hippocrates, cannot be subverted by the unauthorised deduction of the British army statistics, that it is 'by no means likely that any beneficial influence can be exerted by climate itself' in pulmonic lesions.

Phthisis Pulmonalis.—These cases are reported under two heads, viz. tabes pulmonalis and phthisis pulmonalis. Under the former are included cases in their incipient stage, and also those of chronic catarrh; and under the latter, the cases of confirmed tubercular phthisis, characterized by softening and ulceration.

The cases reported are as under:—

Tabes pulmonalis,	208	men and	34	women,	making	242
Phthisis pulmonalis,	117	" "	34	"	"	151
Totals,	325		68			393

Of these there died 110, 85 men and 25 women, all occurring in the class of phthisis pulmonalis. The ratio of deaths from this cause (110) compared with the total mortality, (420,) is as 1 to 3.81, being among males 1 to 3.05, and among females 1 to 6.40.

From an examination of the church register at Stuttgart during the same period, 1828—1838, excluding all deaths in individuals under fourteen years of age, Dr Cless obtained the following results relative to the mortality from pulmonary consumption:—

Deaths from all causes.		*Deaths from Consumption.*	
Men,	2071	Men,	518
Women,	2285	Women,	406
	4356		924

The ratio of deaths from consumption among the adults of Stuttgart compared with the total mortality is consequently one in 4.71, being amongst males, one in 3.61, and amongst females, one in 5.62. Thus whilst in the Catharine Hospital, a little more than a fourth of all the deaths arise from pulmonary phthisis, the ratio among the population of Stuttgart is nearly as low as one-fifth. This difference, however, admits of explanation on the ground that tubercular diseases would be more apt to prevail among the class who become the inmates of an hospital than among the general population of a city; but the difference may be actually still greater, as some diseases may have been introduced into the above table relative to Stuttgart that do not fairly belong to pulmonary phthisis, inasmuch as Dr. Cless included in his list of consumption, not only those reported as *Schwindsucht*, but likewise *auszehrung*, *lungensucht*, and *zehrfieber*

Our author continues his comparisons with the results obtained from other hospitals, and from the bills of mortality of other cities. Thus in Berlin, the proportion of deaths from pulmonary consumption to the whole mortality is as 1 to 4.95; in Hamburg, as 1 to 3.4; in Montpelier, as 1 to 3.3; in Strasburg, as 1 to 2.84; in London, as 1 to 4.86; and in Edinburgh, as 1 to 7. Hence it appears that the mortality from this cause in Stuttgart, is little different from the results given in other places.

The reports of the Registrar General of Great Britain confirm this result. Thus in the following table are given the number of deaths caused by phthisis in each, 100 deaths happening in England and Wales in both sexes separately, and in their aggregate:—

Years.	*Males.*	*Females.*	*Both sexes.*
1337,	19.08	21.5	20.22
1833,	17.4	29.9	19.15
1839,	17.5	19.2	18.65
Mean,	17.99	20.73	19.36

It thus appears that nearly one in every five deaths is caused by phthisis—a result that coincides with that just given, relative to London, viz., 1 in 4.86.

As regards the comparative tendency to phthisis in the two sexes, the results of the Catharine Hospital, as has been already seen, show that the male is nearly twice as liable to this disease as the female, the ratio of deaths from this cause to the whole mortality being in the former 1 in 3.05, and in the latter 1 in 6.40. In Stuttgart, according to the table given on a preceding page, these averages are 1 in 3.61, and 1 in 5.62. In Berlin, the difference is equally striking, that of males being 1 in 4.23, and that of females 1 in 6.26. In the several hospitals of Edinburgh, during the years from 1833 to 1838, a similar result is exhibited, there being reported in an aggregate of 2512 male patients, and 2749 female patients, 185 cases of phthisis among the former, and 112 among the latter. This law as regards the comparative tendency to phthisis in the two sexes is likewise confirmed by the table of the Registrar-General given above. The ratios being 17.99 to 20.73, the tendency of the female to consumption is expressed by the number 1.14, that of the male being taken as unity. But this calculation of Mr. Farr would, doubtless, be more accurate, if the actual mortality from phthisis in the two sexes were compared with the number of persons of each sex living at the time. It would seem then to be an established truth, that there exists a greater tendency to phthisis among the male than the female sex, notwithstanding the opposite conclusions of M. Louis, of Paris.

The relative influence of the seasons as expressed in the number of admissions and of deaths in each, shows that tubercular phthisis is not governed by the same laws that control pneumonia, pleuritis, and catarrh. The statistics of the Catharine Hospital give the following results as regards the number of admissions, &c. of deaths. Winter 81 cases and 24 deaths; spring 23 cases and 28 deaths; summer 185 cases and 25 deaths; and autumn 82 cases and 24 deaths. It is thus seen that in respect to admissions, the law compared with that of pleuritis, pneumonia, and catarrh, is nearly reversed; whilst in reference to the mortality from phthisis, each season presents nearly the same result. At Berlin, among 4808 deaths from phthisis, 2755 occurred in winter and spring, and 2124 in summer and autumn. At Strasburg, from 1819 to 1827, among 1469 fatal cases of phthisis, there died 405 in winter, 435 in spring, 307 in summer, and 322 in autumn. All these results, however, concur in showing, though the difference is small, that more phthisical patients die during cold weather, (winter and spring,) than in the warm seasons of summer and autumn.

Of the several forms of phthisis, it may with good reason be maintained that chronic bronchitis, as regards the influence of the seasons, belongs to the category of pleuritis, pneumonia, and acute catarrh; but phthisis, as connected with a tuberculous state of the constitution, we regard as far more under the influence of other causes. In England, as it has been satisfactorily ascertained that the maximum of liability to phthisis exists among those who suffer the least exposure to climatic variations, it follows that the influence of the latter must be considered as secondary to the action of other causes, as, for example, occupation, food, and habits. Although it cannot be doubted that a changeable climate exercises an evil influence on constitutions predisposed to phthisis; yet, as we find that the most variable climates are best adapted for the development of the various mental and bodily powers, it is apparent that the agency of this cause in the production of phthisis has been much exaggerated, or much too exclusively considered.—Among the causes which we regard as productive of the cachectic condition of the system which precedes the formation of tubercle, which tends to destroy the balance of the functions, and diminish the tone of the system, thus robbing the blood of that rich fibrinous and vital condition, by which proper nutrition and the organic functions are sustained, are,—unhealthy air, whether from closeness, humidity, or impurities,—long-continued exposure to extremes of temperature as connected with the seasons, or to cold alone as from insufficient clothing, in constitutions which have not vascular irritability enough to induce inflammation,—imperfect nutrition, whether from improper or deficient food, the abuse of spirituous liquors, or from lesions of the digestive or assimilative organs,—venereal excesses,—repeated courses of mercury,—profuse and very debilitating discharges, or their sudden suppression when habitual,—the depressing passions, as disappointed love, distress from reverses of fortune, etc.,—irregularities of the uterine function, especially when of a chlorotic character,—adynamic fevers, as well as the exanthematous forms when followed by the atonic state.

Peritonitis and Enteritis.—Of 252 cases of peritonitis, 84 occurred in winter, 56 in spring, 49 in summer, and 63 in autumn. The monthly maximum (39) belongs to January, and the minimum (12) to May. Comparing the number of cases of these two diseases with that of pleuritis and pneumonia, the latter is more than three times greater than the former; and whilst the majority of the inflammations of the chest occurred amongst men, (527 to 452,) the rule in the abdominal inflammations is more than reversed, being 226 female cases to 62 male. The mortality from the former amongst the men is five times greater than from the latter, being 20 and 4; but amongst the women, the mortality from each is very nearly the same. The aggregate of the cases of inflammation both of the thorax and abdomen, is equivalent perhaps to one-tenth of all the diseases registered. In both classes, the maximum of cases occurs in the coldest period of the year.

Rheumatism.—These cases are reported under three heads, viz:—*febris rheumatica*, *rheumatismus acutus*, and *rheumatismus chronicus*. There are 1079 cases registered, being about one-eleventh of the aggregate of cases; but the proportion in the two sexes is very unequal, making among females one-eighth of all their diseases, and amongst males only one-seventieth. The relative influence of the seasons in the etiology of these affections is expressed in the following ratios:—

Winter.	*Spring.*	*Summer.*	*Autumn.*
306	292	264	216

But it is only the '*Febris rheumatica*' that the influence of the seasons is decidedly evidenced, winter being 198, spring 193, summer 150, and autumn 125; and as regards the months, the minimum, 31, occurs in October, and the maximum, 77, in February. '*Rheumatismus acutus*' is uninfluenced by the seasons, whilst '*Rheumatismus chronicus*' has the highest ratio in summer. Thus no season is exempt from some form of rheumatic affection.

Two cases proved fatal, one on the supervention of inflammation of the lungs, and the other of the heart, both being females.

Erysipelas.—These cases are arranged under ***Febris erysipelatosa*** and ***Erysipelas faciei***. Of both there occurred 373 cases, of which 117 were males, and 256 females. The fact of the ratio of the females being more than twice as high as that of the males, is not extraordinary; for, according to Frank, the proportion is as 4 to 1, and according to B. Phillips, of London, as 3 to 2. Amongst the men, the bakers give a higher ratio of *erysipelas faciei* than any other trade. No case terminated fatally. The treatment consisted of antiphlogistic purgatives, without emetics or stimulants.

Chlorosis.—In Stuttgart, amongst the diseases of females, this is one of the most extensive prevalence. The total of cases is 358, but this falls short at least one-third of the actual number, for many of the cases, which were involved with acute diseases, were reported under the latter names. Dr. Cless estimates that at least one-twelfth of all the female patients admitted into the hospital, labored under chlorosis. It is a general impression, adds our author, that chlorosis and its kindred affection, hysteria, pertain almost exclusively to the higher classes of society; but the experience of the Catharine Hospital shows that both these diseases are not less prevalent among the lower classes, such as hired domestics, than among those who have been educated, and who continue to live in the most artificial modes. The relative influence of the season, in the production of chlorosis, is expressed by the following ratios:—winter 77, spring 88, summer 114, autumn 87, thus showing a regular connection with the increase and decrease of temperature.

Scabies.—The total of cases of this disease, 2447, is remarkably great; and what is still more extraordinary is, that 2073 of these cases occurred among men, and only 374 among women. This inequality Dr. Cless ascribes, with good reason, to the operation of external causes, independent of any constitutional difference in the sexes. The influence of the seasons in the etiology is not very marked; but winter gives the highest average, whilst the lowest is presented by the months of August, September, October, and November. The connection of the several trades with this disease is, however, more strikingly displayed in these statistics, as is shown by the total of each trade brought under treatment compared with the total of the same trade, who are members of what may be called a Beneficial Society, (*Krankheitskostenversicherungskasse.*) The trades yielding the lowest ratios of itch, are tanners, stone-cutters, and masons, carpenters, bakers, workers in gold and silver, butchers, and printers; and those giving the highest means, are, weavers, shoemakers, wheelwrights, tailors, joiners, turners, and book-binders. Thus whilst the average of tanners is but 1 in 52.7, that of book-binders is 1 in 4 2. These various results, doubtless, arise from the different modes of living, and from the diverse external relations of each trade, as poverty, uncleanliness, living crowded together, and especially sleeping together, as well as the stuffs among which operatives labor.

That book-binders should give a ratio as high as 1 in 4 2-10, is a very unexpected result. Believing that the inequality of the ratios of different trades is mainly ascribable to the nature of the materials employed in each, our author inclines to the opinion that the high average of book-binders arises from the circumstance that their hands are daily covered with paste and glue. We are free to confess that the relation of cause and effect is here beyond our comprehension. Now were it paper-makers, instead of book-binders, it would be easy to refer the cause of the disease to a contagion lodged in the rags which they are obliged to assort.

It is a remarkable fact that among all the workers in wood, such as turners, joiners, and wheelwrights, a ratio next to that of the book-binders, obtains, the first being 1 in 4.6, the second 1 in 5, and the third 1 in 5 2. Dr. Cless asks—Can the glue, as in the case of the book-binder, also here exert its influence?

Amongst tailors, the ratio of itch is as high as 1 in 5.1, a result at which no one, in the opinion of our author, will be surprised. 'They ought indeed,' he says, 'according to universal opinion, figure in the front rank; but this honor our statistics do not entirely award them, thus permitting the evil renown of the tailor in this respect to appear, at least in part, as a prejudice.' The chief source of the disease in this class, independent of the material in which they work, he ascribes to the crowded state in which the journeymen tailors live, in quarters in which the contagious principle, like the sacred fire of the vestal virgins, is never extinguished.

Shoemakers and weavers come next on the list, the ratio of the former being 1 in 5.5, and of the latter, 1 in 5 9. To mention a few more in the scale of ascending exemption, the average of saddlers as 1 in 8.3, of coopers 1 in 9.7, of soap-boilers 1 in 11.1, of button-makers 1 in 12.8, of peruke-makers 1 in 15 2, of mechanical and optical instrument-makers 1 in 18.3, of printers 1 in 24.9, of butchers 1 in 27.3, of workers in gold and silver 1 in 30 6, of bakers 1 in 34.4, of carpenters 1 in 38.5, of masons and stone-cutters 1 in 46.8, and of tanners 1 in 52.7.

In these last, we discover the influence of healthful occupations in diminishing the prevalence of the disease. Among tanners, for instance, who give the lowest average, (but 4 cases being registered, out of 211 entitled to the benefits of the hospital,) the very material in which they work, doubtless, acts as a true prophylactic. The stone-cutter, the mason, and the carpenter, are no doubt indebted for their comparative immunity, partly to the free air they breathe, and partly to the nature of their working material. It is remarkable that the baker possesses a similar exemption, notwithstanding his frequent liability to chronic exanthems, (lichen, eczema, and impetigo,) on the hands and arms, an immunity which our author ascribes to the constant application of flour to the skin.

We have thus endeavored to follow Dr. Cless through the main course of his investigations; and when it is considered that the data and conclusions he presents, are the result of years of observation and severe mental toil, our readers, we trust, will concur with us in the opinion that he has rendered a service to humanity.

Report of the Joint Special Committee, on the subject of the Effects of Lead Pipes upon Well Water, in the City of Lowell. Lowell: Printed by William Schouler. 1841. pp. 21.

This interesting and valuable document owes its origin to a communication, addressed by several of the most respectable inhabitants of Lowell, to the Common Council, in which they stated their knowledge of the injurious effects of the water in the public wells which had become impregnated with lead, and prayed the civic authorities to investigate the matter and devise some remedy. Dr. Samuel L. Dana was solicited to conduct the investigation, and he has in the present 'Report' discharged his task in a very creditable manner. After describing in a clear and succinct manner the action of water and of various salts on lead, Dr. D. proceeds to speak of the injurious effects of water thus impregnated, and then points out the manner in which the evil is to be avoided. After showing the inapplicability of galvanized iron as a substitute for the leaden pipes, Dr. D. concludes his able report by saying: 'I should recommend—1. Wood wherever it can be used—2. Cast iron or wrought iron tubes—3. Copper, protected either by pure tin, or, still better, perhaps, with pure zinc. We commend this 'Report' to the careful attention of the guardians of the public health in this city.

Some Account of the Origin and Present Condition of the Medical Institute of Louisville, with Remarks on a late Rejected Report. Louisville, Ky.: Prentice & Weissenger. 1842. 8vo. pp. 30.

This is an elaborate and, as Dr. Manley would say, somewhat 'saltish' *exposé* of the conduct of some individuals who seek, it is alleged, to endanger the security of the present managers of the great flourishing school of the West. We do not know much of this matter, and are unwilling to enter into it, when only one side of the controversy has been presented to our notice. We do not indeed suppose that to the generality of our readers the affair can be of great interest, and give our cheerful assent to one of the statements with which the pamphlet concludes—'Meantime it can be of no importance who conducts the school, provided only that it be done lawfully and successfully.' We believe we can also agree with the next assertion—'That it is successfully conducted every man is a witness.'

The History, Diagnosis, and Treatment of Typhoid and Typhus Fever; with an Essay on the Diagnosis of Bilious Remittent and of Yellow Fever. By Elisha Bartlett, M. D., Professor of the Theory and Practice of Medicine in Transylvania University. Philadelphia: Lea & Blanchard. 1842. 1 vol. 8vo. pp. 393.

Dr. Bartlett's design in the preparation of this useful volume, was, as he modestly states in the preface, 'to present a compendious summary of our actual knowledge' of the interesting and very important diseases of which it treats. He has, we think, accomplished his purpose in a manner creditable to his own industry and judgment, and profitable to his readers. Such a work was certainly wanted here, and we can have no doubt that the profession will feel indebted to the labors of Dr. Bartlett. We have not had leisure this week to prepare the lengthened notice of the volume which we had intended, but we shall take an early opportunity of giving a brief analytical review of it. In the meantime we heartily commend the work to the favorable notice of the profession; very few of whose members, indeed, we will undertake to say, will fail to profit by a careful perusal of its practical and well-arranged contents.

On a new Process for Anatomical Injections.*

M. Doyere, in a letter addressed to the Academy of Sciences, Paris, July 12, 1841, gives the following account:—I have employed for nearly two years, a very simple process for obtaining fine injections. This process, which I believe likely to render some service to the anatomy of structure, and probably also to pathological anatomy, essentially consists in causing to enter in the same vessels, *within a certain interval of time,* two finely filtered saline solutions, which, by double decomposition, give an abundant and opaque precipitate. This succession of two injections, is that which distinguishes my process from many others tried without success to obtain the injection of the capillary system by the same principle. I inject the second solution, as soon as the first has passed from the arterial system into the venous and lymphatic systems.

---

* Although the priority of discovering this process, and publishing the same, are decidedly due to M. Doyere, yet

I have tried on animals a great number of insoluble salts, with a view to determine those which would give the most satisfactory results. I prefer to all others the chromate of lead. I first inject the chromate of potass, and am convinced that the order of injection is a point not to be neglected. A blue color may be obtained by the precipitation of Prussian blue; brilliant red by iodide of mercury; white by the carbonate or sulphate of lead. The first has better succeeded with me than the carbonates and sulphates of lime and baryta.

The advantages which this process appears to me to possess over those in use, are above all to shorten the process of making fine injections, and to supersede any other preparation. It may be used with equal advantage cold or hot, in general or partial injection; the materials employed are unalterable, and may be consequently always ready. I will add, that the most minute injections required only a pressure which was evidently less than that of the heart's action. M. Poiseuille, to whom I made the process known several months since, in order that he might make use of it in his particular researches, has constructed an instrument by the assistance of which he can inject either liquid with that degree of pressure he considers proper.

By the assistance of this process, I have more than once succeeded injecting by the femoral artery in a single operation, and in a few minutes, the capillaries of the muscular system in an entire animal, the adipose and cellular systems of white and gray matter of the brain, of the conjunctiva, of all mucous membranes, intestinal villosities, &c. The capillaries thus injected by the chromate of lead are more filled, especially after drying, than by the injections of size, but less than by those of varnish (vernis); there also remains some doubt in my mind relative to the actual diameter of the latter canals. Those which run parallel to each primitive muscular fasciculus, to the number of four or six, appeared to me to possess, in the dog, 1-300th or 1-400th of a millimeter; but it is possible that their dimensions had been reduced by the action of one or the other of the two solutions employed, or that they had not been sufficiently filled. I am now engaged in determining the relation which exists between the size of injected vessels, and their size during life.—*Comptes Rendus.*

Books, &c. Received.

Ricord on Venereal Diseases, &c. A new Translation from the French. Published by P. Gordon, New York. [Notice in our next.]

Warrington's Obstetric Catechism. [We have already expressed a favorable opinion of this useful manual.]

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, October 15, 1842.

In our Journal of January 15th, we gave a brief notice of a paper on the Thymus Gland, by Charles A. Lee, M. D., of this city, and published in the January number of the 'American Journal of Medical Sciences.' One of the conclusions which Dr. Lee had deduced from a very full and careful survey of the whole subject, was, 'that the disease called ***Laryngismus Stridulus, Thymic Asthma, Spasm of the Glottis,*** &c., was not caused by an enlargement of the Thymus Gland, as maintained by Kopp, Hirsch, Montgomery, Roberts, and others, and that in a large majority of cases, where there is an hypertrophied state of the Thymus, such enlargement is to be considered *in the light of an effect, and not a cause of the morbid symptoms.*' On turning to the original monograph of Dr. L., we find the following remarks:—'It seems to us highly probable, and we believe further observation will confirm the correctness of the opinion, that where the circulation through the lungs is obstructed from any cause, the thymus will be found congested, or in a state of abnormal enlargement. Hence the reason of its apparent hypertrophy, where the foramen ovale has remained open, or where the patient has perished of pneumonia.' In speaking of the cases of enlarged thymus, which have been published in the various medical journals, Dr. L. remarks that 'the engorgement was the *effect* rather than the *cause* of the morbid symptoms, which were doubtless occasioned by lesions of the circulatory, or respiratory organs, or both.' (*Amer. Jour.* Jan. 1842, p. 142.)

We are happy to find, by a perusal of late foreign medical journals, that the views of Dr. Lee, in relation to the pathology of this affection, and which he was the first to suggest, have been adopted by some of the leading pathologists of Europe. In the London Lancet for July 9th, 1842, (p. 507,) we find in a paper by Marshall Hall, on the 'Stridulous Convulsions of Infants,' the following observations: 'Much has been said by various authors about the enlarged condition of the thymus gland as the *cause* of the crowing inspiration and convulsion. They have not reflected that enlargement of the thymus might be a natural *effect* of the violent convulsive efforts observed in this terrific malady. I have known the thymus gland become and remain enlarged in like manner after the efforts of severe and protracted labor, and have known the eyes to be

---

we must here state, that we have for upwards of twelve months seen injections of the corpuscles and Haversian canals in bone, the tubes on the fibre of some sponges, &c., similarly prepared by our esteemed correspondent Mr. George Busk, Surgeon to the Hospital Ship Dreadnought. We can vouch for his not being acquainted with M. Doyere's process, the account of which bears date July 12, 1841.—*Microscopic Journal.*

bloodshot from hooping-cough; the eyelids to be ecchymosed, in spots, from epilepsy, and from the efforts of vomiting and parturition. In this manner we may understand how enlargement of the thymus may be an effect of this formidable disease. Viewed in this point of light, we can readily imagine that it would subside with the disease. In this manner we are led to consider the disease as not necessarily incurable, which it must be, if it depended on organic change of structure. This case affords another example of morbid anatomy, erroneously interpreted, leading to erroneous views of disease.' In Dr. Hall's former publications on this affection, including his late 'Lectures on Diseases of the Nervous System,' a portion of which we have already given to the public, we find nothing in relation to hypertrophy of the thymus being the *effect* and not the *cause* of stridulous convulsion; nor in any other European writer who has treated of this subject. We are therefore disposed to claim for Dr. Lee the merit of having discovered the real cause of the enlargement of this gland, in this and other diseases of a similar character, and we believe the profession have already conceded him the same. And this claim we are the more desirous to press, because the present is not by any means the first instance, in which the discussion, in this country, of important questions connected with medical science, has aroused the attention of our brethren on the other side of the Atlantic, to the same subjects.

Some of our city friends have been wondering what kind of a machine that is, which has recently been placed on the top of the Stuyvesant Institute. It resembles a windmill, and its revolutions are accompanied by a very loud noise. Several have shrewdly conjectured that it is a new barrel-organ, on which the 'Phenomenon' is destined to perform. But this is erroneous. We have taken the trouble to enquire into the matter, and have ascertained that the wonderful apparatus is an exceedingly ingenious *grinding-machine*, to which all the Stuyvesant students will be subjected. We shall, therefore, no more be pained by hearing of the rejection of poor unfortunates at the Naval Board. We congratulate this eminent Faculty on their novel and important apparatus, of which we may perhaps give a drawing in some future number.

We cannot help bestowing our meed of approbation on the generous, disinterested, and sensible conduct of Professor Paine, in his ready compliance with the arrangements of his colleagues, who have recently associated with him, the celebrated Doctor Sands. Dr. Paine will now be enabled to devote himself altogether to the 'vital forces,' whilst his distinguished associate will instruct the students in Materia Medica, and the 'most common manipulations and impositions practised, with their real and marketable value.' Some men in Dr. Paine's circumstances, would have regarded this felicitous appointment as a tacit reproof,—a sort of underhand declaration of incompetency,—but the amiable Professor, like a good, quiet, sensible man as he is, is quite grateful to his brethren of the Faculty, for their kindness in giving him such an accomplished and distinguished assistant.

THE MEDICO-CHIRURGICAL REPORTER.

Cases of Apoplexy consequent on Syphilis: with Clinical Remarks.

BY DR. BUDD,

Professor of Medicine in King's College Hospital, London.

During the past year three patients have been brought into the hospital, under my care, with hemiplegia, the result of an apoplectic seizure occurring in the advanced stages of constitutional syphilis. These cases made a greater impression on me, in consequence of their resemblance to two cases which strongly arrested my attention several years ago. Two young men, with whom I was well acquainted, were struck with apoplexy about the same time. They were of naturally robust constitutions, but had both, for some time before the seizure, been affected with syphilitic rupia and periostitis. There could be no doubt that the apoplexy was caused by the syphilis, or by the mercury given to cure it. The former hypothesis seemed to me the more probable.

Of the three cases that you have seen in the hospital, the first in order is that of James Wetherall, æt. 27, who was admitted on the 21st of April, 1841. He told us that his health was very good until five years ago, when he had chancres, which were treated by mercury. After this he had ulcerated sore-throat, for which he was out-patient of St. Bartholomew's two or three months. About four years ago he entered the army, and six or seven months afterwards became affected with very severe headaches, and pains in the arms. On account of these ailments he was several times in the regimental hospital; and on one of those occasions, while in the hospital, he had a seizure, in which he fell down insensible. He soon regained his consciousness, and then found that he had lost the use of his left side, and that his face was drawn to the right. His speech also was greatly altered. The arm and leg were at first completely palsied, so that he could not move a finger or toe. At the end of some months the power of the arm had returned partially, and he was able to walk, but with lameness.

About twelve months ago he had slight numbness in the right hand, and indistinctness of speech; symptoms which were removed by cupping. Has since had four or five slight attacks of the same kind.

About a month before his admission to the hospital, œdema of the legs supervened on his other complaints.

When brought under our notice, his face was puffy and bloated, and his legs were slightly œdematous. The urine was abundant, and highly charged with albumen, which was deposited in solid shreds on the addition of nitric acid.

The left leg was permanently contracted at the knee, and he made great complaint of pain when any attempt was made to straighten it. It had been bent in this way, he said, for a month. The left arm was weak, but he could use it with tolerable freedom. The sensibility of the arm and leg were unimpaired. There was no perceptible paralysis of the face: the tongue was protruded straight, the pupils were equal, and the senses were perfect. His intellect was, however, somewhat impaired: his answers were slow, and his speech indistinct. He was free from headache or giddiness.

He had a large node on the shin of the left leg, and suffered pains in the limbs, which were worse at night. There was great tenderness on the humeri, and on the lower part of the left thigh-bone.

He complained of thirst, but his appetite was good, and his bowels regular.

His symptoms, then, were referrible, in part, to disease of the kidney, which seemed to be of recent occurrence; partly, to the old lesion of the brain; partly, to the periostitis, which still existed.

The dropsy and thirst were, no doubt, connected with the albuminous condition of the urine.

The weakness of the left arm, the indistinctness of speech, and the slowness of intellect, were the consequence of the apoplectic seizure.

The pains in the limbs, and the contraction of the left leg, of the periostitis still existing.

I was led, at first, to refer the contraction of the left leg to the cerebral lesion, but a closer examination convinced me that it depended on periosteal inflammation of the lower extremity of the femur. While physician to the Dreadnought, where syphilitic periostitis is very common, I met with several instances where contraction of the knee-joint, or elbow-joint, was the consequence of a node, or of periosteal inflammation under the flexor tendons.

On account of these latter symptoms I gave him gr. v. of iodide of potassium three times a day. The result was as I expected. In a few weeks the pains in the limbs had disappeared, and the leg was straight. He walked, however, with some lameness, on account of a slight degree of palsy of that leg, which persisted.

He left the hospital much improved in condition. The œdema of the face and legs had disappeared, but the urine continued albuminous.

The second case is that of Henry Harrison, æt. 47, clerk in an office, who was admitted into the hospital on the 14th of May, 1841, on account of periostitis.

He complained of pains in the limbs, worse at night, and there was great tenderness, with some pitting, along the tibia.

He ascribed his ailments to syphilis, which he contracted ten years before. He had not been intemperate in drink, and before he became infected had enjoyed good health. He took mercury, and the chancre healed, but about three months afterwards a scaly eruption came out on the scalp. It was about six months after the healing of the sore, as well as he can recollect, that he first suffered pains in the limbs, which were worse at night.

About seven years ago (three years after the chancre) he had sores (rupious) on the scalp, and very severe nocturnal pains in the head. After these symptoms had continued some time, he had a seizure, attended with loss of consciousness. On recovering his senses he found that his right arm was so weak that he could scarcely write, and that the right leg was also weak. He does not recollect his face being drawn.

The strength of the arm and the leg gradually returned, and at present the only trace of the palsy is slight weakness of the right arm. Says that his memory has been impaired ever since the seizure.

The periosteal pains he now complains of came on three weeks ago.

He was ordered five grains of iodide of potassium three times a day, and soon left the hospital, cured of his periostitis.

The third case is that of William Dodd, æt. 26, smith, who was admitted into the hospital the 2d of Dec., 1841, on account of headache and paralysis of the left arm and leg.

He stated that his health was uniformly good until two and a half years ago, when he contracted syphilis. The chancres healed at the end of two months under the use of pills, which made his mouth sore. About four or five months afterwards, he had sore throat and an eruption on the skin, which, after lasting some months, were cured by mercury. These ailments were succeeded by headache, and by pains in the limbs, which were worse at night; and about last Christmas, by sores on the legs.

The headache was very severe, and, like the periosteal pains, was worse at night.

These symptoms continued until five months ago, when he had a seizure, in which he lay almost unconscious for about an hour. On recovering his senses he found that he had lost the use of the left arm and leg. The tongue and the left side of the face were also partially paralysed. At first there was numbness in the paralysed parts, but sensation was soon restored. After the seizure the headache was less severe than before, but he has suffered from it, at intervals, ever since. The sores on the legs healed, and the pains in the bones were removed by medicine (iodide of potassium?) of which he does not know the nature.

At the time of his admission, he was free from pain in the limbs, his complexion was clear and florid, and he had no eruption, except between the eyebrows, where there was a copper-colored spot, about the size of a sixpence, covered with very small and thin, greyish, scales. He had very little voluntary power in the left arm, and walked awkwardly and with difficulty, on account of the paralytic affection of the left leg. The pupil of the right eye was larger than that of the left; but there was no paralysis of the face or tongue.

The left arm was contracted at the elbow and wrist, and the fingers drawn in towards the palm. It required considerable force to extend the fingers or the arm, but an attempt to do so caused no pain.

The left leg, while he lay in bed, was rigidly extended; and the foot a little turned inwards by contraction of the tibialis anticus.

He had no twitchings in the palsied limbs, but told us that when any thing occurred to startle him the left hand became more firmly clenched. When he was uncovered, the left arm and leg shivered violently, but the right were perfectly still. (This circumstance was witnessed several times during his stay in the hospital.)

The sensibility of the palsied limbs was unimpaired; and their muscles were very little, if at all, wasted.

He complained of headache, chiefly on the right side.

He was purged for a day or two; and then ordered five grains of iodide of potassium three times a day. The iodide produced more than its usual constitutional disturbance, and we were obliged to discontinue it. It was again resumed; and on the 22d, while he was still taking it, he had an epileptic fit, which was followed by severe headache and by feverishness. On account of this, the iodide was again left off, and he was ordered to be bled from the arm and to take brisk purgatives.

On the 4th of January he had another epileptic fit, which lasted nearly an hour. During the fit, the left limbs shook violently, but the right were quiet; he was perfectly unconscious, and foamed at the mouth.

After this he was ordered five grains of blue pill, night and morning. Under this treatment the spot between the eyebrows disappeared, and the headache become less severe.

He left the hospital on the 2d of February, with the palsy just as it was at the time of admission.

In this case the patient was too young to allow us to suppose that the apoplexy was caused, as it often is in advanced life, by degeneration of the arteries of the brain; and he assures us he had never drunk hard, and that he had received no blow on the head. As in the former cases, we cannot help ascribing the seizure either to the syphilis, or to the mercury given to cure it. The latter hypothesis is here very probable. He had indeed taken mercury twice—first, for the chancre; secondly, for the sore-throat and eruption—but the mercury was not, either time, carried to salivation, and he had taken none for twelve months before the seizure. If the seizure were the effect of the mercury, it would in all probability have happened sooner after its administration. We are driven, then, to consider the apoplexy the effect of the syphilitic virus. This conclusion is strengthened by the consideration that, in all the cases, the apoplexy occurred in the advanced stage of syphilis; when the patient had been for some time affected with periostitis, and in every case but one, where no mention is made of rupia, with rupious sores.

It may be a question whether the apoplexy resulted from the immediate action of the syphilitic virus on the brain, or whether it was consequent on syphilitic inflammation of the bones of the head. Dissection, in a case of this kind, would settle the point. If the disease of the brain be the effect of that of the bones, it is most probably seated at the surface of the brain, and in contact with the diseased bone. In Wetherall and Harrison, the intellect was more affected than is usual with the same degree of paralysis—a circumstance tending perhaps to show that the lesion was towards the surface of the brain.

The cases I have related are, I think, sufficient to justify us in considering apoplexy as one of the effects of the advanced stage of syphilitic disease, characterized by periostitis and rupia.

In the case of Dodd, you have remarked many interesting phenomena, resulting, as Dr. Marshall Hall has shown, from the high degree of irritability of the muscles of the paralysed limbs. The left leg was rigidly extended, and the foot turned inwards; the left arm was contracted at the elbow, and the fingers were drawn towards the palm, by permanent contraction of the muscles. When he was uncovered, the left arm and leg were violently shivered from the impression of cold air; while their fellow limbs were perfectly still. The impression was here the same on the two sides; but there was shivering of that side only whose muscular irritability was exalted.

The influence of emotion was also seen in the palsied hand. Dodd told us that, whenever any thing occurred to startle him, the hand, over which he had not the slightest voluntary power, became more firmly clenched. The influence here, like the impression of cold, must have acted on the two sides alike; but its effects were seen only in the hand whose muscular irritability was exalted, and which was no longer controlled by the will.

Another proof of the high irritability of the muscles of the paralysed limbs, more interesting because less frequently seen, was their being convulsed during an epileptic fit, while the opposite limbs were motionless. There is reason to believe, from the complete loss of consciousness, that during an epileptic fit both sides of the brain are affected alike. The left limbs only were convulsed in Dodd, because their muscles were more irritable than those of the right. They gave evidence of an influence too feeble to affect the opposite limbs. M. Cruveilhier has published the details of a case in which the same fact was observed. The patient, who had been many years palsied on one side, was subject to epileptic fits. During the fits the palsied limbs only were convulsed. It would seem from this that the degree of convulsion in epilepsy depends in part on the degree of irritability of the muscles; and we should expect that, as a general rule, the frame would be more convulsed in epileptic fits that occur in the morning on waking, than in those which occur in the evening, when the irritability of the muscles has been somewhat exhausted by the fatigues of the day.—*London Medical Gazette.*

On Incipient Cancer of the Womb.

BY DR. MONTGOMERY, A. M.,

Professor of Midwifery to the King and Queen's College of Physicians in Ireland.

[Dr. Montgomery is of opinion that there is a stage of cancer of the womb which is remediable, and the germs of which may be destroyed, a stage which precedes the two which are usually described by authors; 'and the reason why this stage is not more generally recognized, is that the accompanying symptoms are frequently so slight as to attract very little the attention of the patient, and thus are suffered to remain without treatment, until a profuse hæmorrhage or some violent fit of pain sounds the alarm, and then on examination the disease is found to have passed into its second stage; the surrounding tissues are indurated and consolidated with the organ concerned.' There is no doubt that many of these cases are entirely overlooked by practitioners, simply from not properly examining the vagina.]

The margin of the os uteri is found hard, and often slightly fissured, and projects more than usual, or is natural, into the vagina, and is irregular in its form.

In the situation of the muciparous glands, there are felt several small, hard, and distinctly defined projections, almost like grains of shot, or gravel, under the mucous membrane. Pressure on these, with the point of the finger, gives pain, and the patient often complains that it makes her stomach feel sick.

The cervix is, in most instances, slightly enlarged and harder than it ought to be. The circumference of the os uteri, especially between the projecting glandulæ, feels turgid, and to the eye, presents a deep crimson color, while the projecting points have sometimes a bluish hue.

In two cases of women who died, one of fever, and the other of pneumonia, in a more advanced stage of this condition of the os uteri, the substance of the uterus was found considerably increased in size and thickness, and was intensely vascular.

There is no thickening, or other alteration of structure in any part of the vagina, at its conjunction with which, the cervix uteri moves freely; nor is there any consolidation of the uterus with the neighboring contents of the pelvis; in fact, the morbid organic change appears to be, at first, entirely confined to the os uteri, and lower portion of the cervix.

This stage of the affection is, in many instances, very slow, lasting, sometimes, for years, before the second and hopeless stage is established; during this time, the patient experiences only comparatively slight, and transient attacks of pain, or perhaps only sensations of uneasiness, referred often to the situation of one, or other of the ovaries, or about the os uteri, with anomalous tingling along the front and inside of the thighs; these last for a few hours, or a day or two, and then disappear, perhaps for weeks, but again and again return in the same situation, and for a long time, are not increased in severity; the patient finds that sexual intercourse, now, occasionally, causes her pain, which she ascribes to some deep-seated part being touched, and the act is followed by an appearance of blood; she is, also, often troubled by slight irritability of the bladder; but the appetite, digestion, and sleep, may, for a long time, continue good, and the pulse, generally, gives no indication of the existing disease, or its changes; an observation, which will be found applicable to many uterine affections of a very grave character; in short, the general health may long remain undisturbed, nor has the patient, in many instances, the slightest suspicion, that there is any thing seriously wrong with her, nor thinks of seeking for medical aid, until she is induced to do so, by the solicitations of her husband, or some anxious friend who has become, as she thinks, unreasonably alarmed about her state.

Pathology.—Sufficient observation has fully satisfied me, that, in the great majority of instances, the first discoverable morbid change which is the forerunner of cancerous affections of the uterus, takes place in, and around the muciparous glandulæ, or vesicles, sometimes called ova nabothi, which exist in such numbers, in the cervix and margin of the os uteri, (see my work on the Signs of Pregnancy, &c., pl. ix. fig. 2;) these become indurated by the deposition of scirrhous matter around them, and by the thickening of their coats; in consequence of which, they feel at first almost like grains of shot or gravel under the mucous membrane, afterwards, when they have acquired greater volume by further increase of the morbid action, they give to the part the unequal, bumpy, or knobbed condition like the ends of one's fingers drawn close together. When this second stage (usually described by writers as the first) is established, all means hitherto devised have failed in producing any permanent beneficial effect.

Diagnosis.—The only affection of the uterus, for which this disease could be mistaken, and that only by carelessness, is, the irritable uterus; from which, however, it is essentially different; inasmuch as it is accompanied by, and tends to produce still further change in the structure of the organ; which, although unduly sensitive under examination, is not the seat of the exquisite tenderness and pain observed in irritable uterus; from which, it also differs in having the increase of volume of the parts affected well marked, and constant, until removed by treatment, and in the existence of the other organic alterations already enumerated, as well as in the different result of the affection. From the second, or fully formed stage of cancer uteri, any one accustomed to examine the organ must at once distinguish it.

Treatment.—In almost every instance, the treatment should be begun by the local abstraction of blood, either by cupping, or by leeches applied directly to the os uteri, or as near as possible to the organ; and their application will, in most cases, require to be frequently repeated, and should be accompanied by the free use of anodyne fomentations. With regard to venesection, although it may be desirable to practice it under particular circumstances, it is not, in general, required; and I would say, that the case in which it is called for, should be regarded as an exception in the plan of treatment generally most suitable.

Except there be something specially to forbid its use, mercury should be given, in some form, so as to bring the system very gently, but decidedly, under its influence; for which purpose, it may be combined with iodine in very minute proportions, with camphor, opium, hyoscyamus, or hemlock; and occasionally by friction, especially where there exists evidence of inflammatory action in the iliac hollow, as already adverted to.

Afterwards, iodine or hydriodate of potash may be used both internally and externally; and iron will be found a most beneficial and powerful agent, especially in the form of the saccharine carbonate, or the carbonate given in the nascent state.

The iodide of iron, which combines, to a certain degree, the powers of both remedies, may also be used with advantage in most cases, and will be best administered in the form of Dupasquier's syrup, which is now prepared, of different strengths, by our chemists and apothecaries.

Arsenic has received the testimony of many able practitioners in its favor, as an agent capable of giving great relief in these affections; and I can add mine to the same effect, having obtained marked benefit from its use, especially when combined with anodynes, even in advanced states of this disease: of iodide of arsenic I cannot speak from experience; but, I think, that, both from the nature of the compound, and, still more, from the success which appears to have attended its administration in cancerous affections by Dr. A. T. Thompson and Dr. Crane, of Canterbury, we are justified in expecting, that it will prove a useful remedy in such diseases.

Counter-irritation is an agent of great influence in this complaint, and may be established in a variety of ways, which it is unnecessary to enumerate; but a very effectual mode is, by making a small blister over different parts, in succession, and keeping it discharging freely for several days, by the application of the French dressing, or Albespeyer's papers.

The warm bath and the warm hip bath are means of great value throughout the treatment of this affection; and their effect in soothing the uterine irritation may be much promoted, by admitting the warm water into contact with the internal surface of the vagina and os uteri, which may be accomplished, without difficulty, by introducing into the vagina one of Lassaigne's speculums, which are made of wire-gauze coated over with caoutchouc; or a small plain metal speculum, with perforations in its sides, will answer the purpose extremely well; and the patient can apply the instrument for herself, better, indeed, than any one else could. I may observe, that where warm baths are used in the treatment of amenorrhœa, this mode of managing them may be adopted, with great advantage.

After the removal of the congestion and organic changes from the os uteri, there remains, occasionally, a sensitiveness of the part, which causes the patient much discomfort, and which will be best relieved by the use of the bath, as above directed; conjoined with anodyne applications to the part, or the nitrate of silver in solution; the best mode of applying which, is by means of a bent glass tube, of about an inch in diameter, which the patient can introduce, and manage for herself; all that is necessary is, that she should lie on her back, and introduce the tube as far as its curvature, and then pour into the upper end, the medicated solution, which will immediately pass to the os uteri, and can be retained there, as long as is necessary, the tube filling the vagina sufficiently to prevent its flowing away, which is a great advantage, above all other methods with which I am acquainted, for applying lotions to this part.*

The patient should be strictly enjoined to avoid every thing that could stimulate the uterus, such as riding on horseback, &c.; but, especially, she should refrain from sexual intercourse. I need scarcely add, that the greatest care and moderation will be essentially requisite in the quality and quantity of the patient's diet. Wine, if used at all, should be of a very mild kind, and sparingly taken; and the same rule should apply to malt drinks; the stronger kinds of ale and porter should be altogether prohibited.

---

* I have used these tubes, both straight and curved, to suit different purposes, with my patients, for some years; and find them greatly superior to every kind of syringe, or other contrivance for making applications to the os uteri. I wish to suggest, that if the fluid is to be used of an increased temperature, a metal tube should be substituted for a glass one, which would be in danger of cracking, and perhaps injuring the patient.

No circumstance connected with the treatment of this affection requires more scrupulous attention, than the regulation of the patient's habits and mode of living; indeed, if this be not very carefully managed, all other measures will most probably be defeated.

This is, perhaps, of all others, the case in which extirpation of the part might be expected to be successful; but I could not recommend it, because the operation is a very formidable one, and I know the affections to be curable, without it; besides, we have no means of accurately determining whether the taint is really thus isolated, or whether other parts are not already contaminated; so that, we run the chance of only obtaining that equivocal triumph, in which an operation is blazoned forth as being crowned with brilliant success, while the patient dies of the disease for which it was performed.—*Dublin Journal of Medical Science.*

Ocular Myotomy in certain cases of Amaurosis.

BY M. PETREQUIN.

M. Petrequin, of the Hôtel Dieu de Lyon, has made a communication on this subject to the Academie des Sciences of Paris. 'The theory of analogues rendered it probable, and strabotomy has demonstrated, that the motor system of the eye exercises considerable influence over its nervous system. From what I have observed in those who squint, I have been led to conclude that certain cases of amaurosis have for their primary cause a spasmodic condition of one or more of the muscles surrounding the globe of the eye. It is now a scientific fact, that muscular spasm exists in strabismus, it is not less true that in most cases, there is also considerable weakness of vision in the deviating eye. Myotomy then may become an heroic remedy against amaurosis depending on contraction of the muscles.'

The author of the report then gives two cases, one of amaurosis of the left eye, in which the light returned immediately and completely after the operation. In the other the amelioration, though decided, was not so perfect.

SUBCUTANEOUS MYOTOMY IN ENTROPION.

M. Petrequin, in the same report, recommends subcutaneous myotomy for certain cases of entropion. He says, 'I have recognized the fact, that there are certain cases of entropion produced exclusively by a permanent contraction of the orbicularis muscle. The blepharospasm so often accompanying scrofulous ophthalmia, has at once served as an indication and a proof of this fact. This, then, is truly a muscular entropion.'

He gives a case of complete success, in which he performed the operation in the following manner. He planted the instrument on a level with the floor of the orbit, (the lid being held extended,) passed it under the skin, and the orbicularis, up to the free edge of the eyelid, taking care that no fibres escaped division superiorly; the instrument was then carefully withdrawn, assisting the division by pressing on the eyelid with the finger.—*Gazette Medicale.*

ITEMS AND INTELLIGENCE.

M. Louis on Typhoid Fever.

We observe by the French journals that a new edition of M. Louis' well known work on this subject has recently been published in Paris. Its title deserves notice: 'Recherches Anatomiques, Pathologiques et Therapeutiques sur la Maladie connue sous les Noms de Fievre Typhoide, Putride, Adynamique, Ataxique, Bilieuse, Muqueuse, Gastro-enterite, Enterite Folliculeuse, Dothinenterie, &c. comparée avec les Maladies Aigues les plus ordinaires! Does not this alone indicate how bewildered the ideas of medical men must still be on the all important subject of fever? We had almost hoped that M. Louis would by this time have found reason to modify his opinion as to the seat or proximate cause of typhoid fever being in the intestinal canal; but we find that we are mistaken. He still maintains, and even in more decided terms than ever, that 'the anatomical character of the typhoid affection (a very stupid phrase) consists in a morbid alteration of the intestinal, chiefly the Peyerian glands; and, also, that any secondary lesions are very usually of an inflammatory nature.'

This doctrine is a most fallacious, and unfortunately at the same time a most hurtful, one. While we admit that the intestinal lesions seem, from all accounts, to be of much more frequent occurrence in fever as it occurs in France, than as it is seen in this country, we most confidently deny that they are uniform or constant even in the former case—at least if we can trust the testimony of such men as Chomel and Andral. But even admitting the frequency of intestinal lesions in fever, does it necessarily follow that they are the consequences of simple inflammatary action, as asserted by Broussais, Louis, Bouillaud, and others of this school? Do we observe the same phenomena on dissection in typhus as are found in fatal cases of genuine enteritis? Assuredly not. The patchy redness in different parts of the canal, the tumefied and softened condition of the mucous and submucous tissues, the enlargement, ulceration, and even sphacelation of the follicular glands, &c., cannot surely be admitted as the legitimate evidences of a pure phlegmasia. They might rather be regarded as the results of the irritation of unhealthy acrid secretion on the mucous surface than as the primary and essential phenomena of the disease. But without going so far as this, we have no hesitation in asserting that the intestinal lesions, however frequent they may be in the fevers of Paris, can only be viewed as one of the changes induced by the general disease of the system. To apply the term of *enteritis* to such lesions is not only incorrect in theory, but most pernicious in practice. It has been from the too general adoption of this dogma by the present generation of medical men in France, that so many and so serious errors have been committed by them in the treatment of their patients. When we read the grave discussions that are frequently agitated in the Academy of Medicine of Paris, on the results of some novel mode of treating typhoid fever, what are we to expect from the young surgeons and physicians who are annually drafted away either to the country, or perhaps into the army and navy, immediately after having had their heads crammed with the 'nouvelle doctrine' as taught by the professors of the physiological school!

Part of M. Louis' work is taken up with showing that 'jail-typhus and typhoid fever are identically the same disease.' What rational man ever doubted it? But such are the vague opinions of French medical men on the subject of fever, that M. Louis deems it necessary to devote an entire chapter to prove a position, which has been recognized as an acknowledged truth by British practitioners ever since, and indeed long before the days of Huxham. But then it is at the same time well known that almost every epidemic of fever, whether it appears in jails or other crowded buildings, or in the lanes and dirty alleys of a city, exhibits some peculiarity or other by which it may be characterised; and yet no sensible physician would dream of designating one epidemic as cephalitis, another as bronchitis, a third as gastro-enteritis, merely because the predominant symptoms may be at different times seated in the head, chest, or abdomen. Until medical men can be induced to carry their thoughts beyond the more obvious lesions discoverable on the dissection of patients who fall a victim to typhus fever, they will ever remain involved in a labyrinth of perplexities, which will only be increased by a more extensive acquaintance with the disease. A calm unprejudiced examination of the history of typhus must lead every one, we are inclined to believe, to the conviction that it is the result of an invisible atmospheric agent—call it miasm, malaria, matter of contagion, or what you will—on the human body, acting primarily on the nervous system, and often rapidly absorbed into the system, thereby inducing a more or less decidedly vitiated state of the circulating fluids.

The lesions of the viscera, whether of the cranial, or of the thoracic or abdominal cavities, are all secondary or consecutive phenomena of the disease; their occurrence being attributable either to the contemporaneous influence of other atmospheric agencies, to the idiosyncrasy, habits, and previous state of health of the patients affected, or perhaps to the differences in the nature and degree of the aerial poison that has been introduced into the system. We must admit that, in taking this view of the question there are many points that cannot be demonstrated by actual proofs, and that the theory is essentially based upon a mere probability; but let us remember that there is, and ever will be, much in the history of these diseases, especially those of an epidemic and diffusive character, that must defy the scrutiny of human observation: we cannot *exhibit* the infectious poison of scarlet fever, or of measles, or the miasma which gives rise to intermittent or remittent fevers; and yet no one disputes their existence. It is therefore a very insufficient reply to be told that we cannot demonstrate our theory of the disease. Some modern French writers are constantly trying to make us believe that medicine is capable of being rendered an *exact* science, and that we must not admit any position in our reasonings on disease but what can be proved by actual observation. This is a most foolish and dangerous doctrine. As in moral and political philosophy, so in medicine, there are no permanently fixed and unalterable rules which are inevitably true at all times and under all circumstances. The beauty of a moral precept or the expediency of a political maxim may charm the mind in theoretical speculation; but in our practical dealings with the world, we find, alas! that the line of conduct to be adopted must greatly depend upon the circumstances of each case—ever striving however to act on the principle of doing unto others as we wish them to do unto ourselves.

Dr. Landouzy, of Rheims, the reviewer of M. Louis' work in the French Medical Gazette, states that his own experience in the late epidemic of jail-typhus in that town confirms the opinion that it is analogous, if not identical, in nature with the typhoid fever of the metropolis, and he bases his opinion on the circumstance of the *constant* existence, in all cases and at all periods of the disease, of the intestinal lesions in both forms of the fever. Yet, strange to say, he informs us that in no case were there any symptoms of such lesions during the life: 'la diarrhée, la douleur abdominale, le meteorisme et le gargouillement ne se sont jamais rencontrés.' How can Dr. Landouzy, or any any other sensible man, in the face of such a statement as this, continue in the belief that the disease, in which these symptoms were absent, was an inflammatory affection of the mucous coat of the bowels; in other words, that it was a 'gastro-enterite,' or 'dothinenterite.' He suggests, as a novel idea, that the difference in the symptoms of typhus fever in different times and seasons may be connected with some difference in the type or genus, as he calls it, of the disease, and very coolly remarks that 'the observations of authors on this point of pathology having in truth but little or no value until the 'beaux travaux' of M. Louis have become generally known, we must wait for new epidemics of typhus before we can offer a positive opinion upon the subject.'

Has Dr. Landouzy never heard of Sydenham or Huxham, or of Cullen, or of his own countryman Pinel, not to mention a century of other authors, who have all insisted upon this essential fact connected with the history of fevers—the differences in the character of the disease according to what has been demonstrated the 'medical constitution' of the season? Little is the wonder that the French are making discoveries in medicine almost every day: they seem to be utterly unaware of their own well expressed motto, 'nothing is so new as that which is forgot!'

The therapeutic portion of this edition of M. Louis' work has received, we are informed, 'd'immenses developpemens;' but the reviewer does not tell us particulars; all that he says is, that 'the author *seems* to prefer in the greater number of cases the use of evacuants to any other remedies.' The little word *seems* (semble) implies, if we are not much mistaken, a mighty deal in reference to M. Louis' mode of treatment. It is well known that this gentleman, however high he may be regarded as a morbid anatomist, cannot be appealed to as an authority on practical subjects. Some years ago, as we have noticed in a former article, he made the important discovery that bloodletting and blistering had little or no efficacy in subduing pneumonia! He has probably extended the application of this discovery to the treatment of fevers, and may have found out that by far the best mode of managing them is to do nothing.

In this respect his example offers a marked contrast with that of M. Bouillaud, a disciple of the same pathological school, whose 'grande decouverte' is the 'nouvelle formule' of bleeding 'coup sur coup,' so as to 'juguler' the disease at once!! But we trust that it is quite unnecessary to expose the fallacy of this gentleman's views at present, as we have so repeatedly of late years cautioned the English reader against the errors into which he is apt to lead the inexperienced by the bold and confident manner with which he proclaims his marvellous success.—*Med. Chir. Review.*

Prevention of Poisoning by Arsenic.

TO THE EDITOR OF THE LANCET.

SIR:—

Believing that the object of the 'Lancet' is to do good, and, also, from a melancholy case of poisoning from arsenious acid, which has lately come under my observation, I have been induced, in the language of the 'temperance folk,' to give you my experience, and also to offer a few suggestions by which your numerous readers may profit, to the advantage of themselves and the community at large. In France and some other portions of the European continent, the retailing of arsenic is subject to severe legal restraints, the infringement of which subjects the retailer to severe penalties. As we have no enactment of this description in this country, the tact and judgment of the druggist must take its place, and upon a rigid exercise of this faculty alone, can he be exempt from the moral responsibilities which his own conscience requires, and his fellow creatures demand. It is well known that the ostensible reason assigned for the purchase of this fatal mineral is, the destruction of vermin. As there are less hazardous means of getting rid of this nuisance, my practice has *always* been, when applied to for this 'deadly weapon,' to substitute some innocent white powder, the potassa nitartras, attaching to it the ominous cognomen of 'poison.' The fruits of this plan can best be seen by the two following cases, which I have selected from many others:—

A lady applied to me for sixpence worth of arsenic to destroy rats; on returning home she took the contents of the paper, and displayed the label with triumph. I was of course sent for. In this case domestic altercation was the inducement to the 'rash act;' and in this, as in most cases of this description, the patient was not sorry to recover: and I believe that in nine cases out of ten where attempts at poisoning have been made, the patients do not well calculate the consequences; but entertain a latent hope that some antidote will be administered in time to arrest the fatal termination, and then commiseration will come in to give the point that has been contended for. I appeal to you, Mr. Editor, as we have no moral means of counteracting this *game* of suicide, is it not proper, when in our power, to make the physical means used to effect this fatal object such, that they may give all the *amusement* the imbecile mind may desire, and still prevent any fatal consequences ensuing.

The other case I shall mention is one in which my *hygieian* plan was successful in saving the life of one of that innocent age, which enlists our best and holiest sympathies. A woman purchased from me a portion of *pseudo* arsenious acid, mixed it with cheese, and placed it, as she supposed, in a place of security; but the wind blew it down from the shelf on which it was put—it was found by her little daughter, an infant, and eaten. I hardly need remark, had it been what she supposed, the child must have perished, for some time had elapsed before it was discovered. The insertion of these remarks in your widely circulating periodical may give some individuals materials for thinking, and will, I believe, be satisfactory to every philanthropist.

B. G.

New York, October 10th, 1842.

[The course adopted by this correspondent readily commends itself to all apothecaries. But some authoritative measures to regulate the sale of poisons are absolutely required. We have often intended to advert to this matter, and will do so in our next.—Ed. L.]

[*Written for the Lancet.*].

The Life of a Good Physician.

BY A LADY.

The life of a good physician is one of toil and privation from the beginning to the end of his career; and the more eminent he becomes, the greater are his anxieties and fatigues. Unlike men of other professions, age does not exempt him from labor, nor does wealth allow him leisure; be he rich, or be he poor, he must give his services by day and by night, and often without fee or even the reward of sympathy.

He holds a mysterious power over the minds of his patients; they willingly put their life in his hands, and they trust he will be merciful. He is merciful; for scorning the base practice of reducing a man to the verge of the grave that he may show his skill in bringing him up again; he uses some simple, yet efficient remedy, and the case is dismissed. He is sparing of the lancet in what are called bilious attacks, for he knows full well how careful nature is to preserve the blood. His skill teaches him that to draw this vital pabulum from the system while the biliary ducts are in a sluggish state, is to endanger life.

Our good physician is not a gossip; he speaks not of what passes in the sick chamber; he tells no anecdotes, nor betrays confidence: you can trust him as if he were your father. But there *are* medical gossips, and Heaven help the patients! for their aches and their pains, their foibles, and worse than all, their poverty, are exposed to all who will listen.

Merchants have clerks of various grades, assisting them in every effort they make; the mechanics have their workmen; the men of the bar have assistants, who do their drudgery; and the clergy have their wardens and their vestry, all of whom take off the burthensome part of their labors. But the physician has to depend upon himself alone—he has no help—he must think and act without the aid of menial or equal, for it is *life* that he is to save.

It will be said that he, also, has relief, for that the *nurse* follows his direction and administers the medicine which he prescribes. If this were so he might indeed rejoice; but experience teaches us that this is error. When the merchant finds that his affairs are going wrong, owing to incapacity or want of good principles of his clerks, he dismisses them and recovers of the blunders they made. But when the nurse disobeys the orders of the physician, it then requires the help of Heaven to remedy the evil.

The good physician therefore has to contend with disease, with refractory and thoughtless patients, and with the ignorance and bad principles of nurses. We cannot conceive of a more responsible or more wearisome profession than that of a physician—one who has a conscience—one who knows and feels every hour of his life that the eye of God is watching his motions.

Men of business settle their accounts at the end of a week, a month, or a quarter; but the physician humbly waits for twelve months, and sometimes longer; yet his bill *always* comes too soon, and it is *always* considered as extravagant. Independently of this he is expected to visit the poor gratis, and cure the servants and poor relations of the family he visits, gratis—in short—gentle reader, if you have a good physician, and his bill lies on your desk still unpaid, reflect upon all his cares, his labors, and, in fact, his trials, and cheerfully pay him his just demands.

Widows and Orphans' Fund Association.

TO THE EDITOR OF THE LANCET.

Sir:—

Enclosed I hand you a sketch of the proceedings of a meeting of the subscribers to the plan proposed for an association for the relief of the Widows and Orphans of Medical Men, which you will consider perhaps of sufficient interest to your numerous readers to warrant its insertion as an item of intelligence; if so, you will confer a favor on those more immediately interested in the subject.

Yours, &c.

H. D. Bulkley.

New York, October 12th, 1842.

A meeting of the subscribers to the plan proposed for raising a fund for the relief of Widows and Orphans of Medical Men, was held at the Hall of the College of Physicians and Surgeons, in Crosby street, on Saturday, 8th inst., for the purpose of organizing a society and electing its officers.

Dr. James Cameron was called to the chair, and Dr. H. D. Bulkley chosen secretary.

After passing a resolution offered by Dr. Delafield, extending the time allowed for paying the initiation fee to a period of three months from the date of the present meeting, and still allowing the time of membership to date from this meeting, the following gentlemen were chosen officers of the association for the ensuing year:—

Dr. Edward Delafield, President.
Drs. F. U. Johnston, J. Revere, and J. Stearns, V. Prests.
Dr. Isaac Wood, Treasurer.

Managers.

Drs. James C. Bliss,
H. D. Bulkley,
G. P. Cammann,
Thomas Cock,
Joel Foster,
J. H. Griscom,
A. N. Gunn,
R. K. Hoffman,
A. T. Hunter,
Moore Hoit,
Drs. Jared Linsly,
James Macdold,
J. B. M'Ewen,
William W. Miner,
Valentine Mott,
Willard Parker,
A. C. Post,
J. Kearny Rodgers,
Hugh Sweeny,
Jas. A. Washington.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, OCTOBER 22, 1842. No. 17.

[FOR THE NEW YORK LANCET.]

MUSCLES OF THE EYEBALL.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. I.

68. I am now to speak of the muscles of the eyeball, and if I were concocting a Bridgewater treatise, I should dwell more particularly on those muscles than on any other part of the visual apparatus. The evidence of design in their formation and position is so manifest, so palpable to the simplest understanding, that no one could tolerate the idea for one moment that they were the work of chance. The whole mechanism of the eye is certainly quite as wonderful and apparently more beautiful, but the use of each particular part is not so obvious. In fact, it requires time and repeated experiment to comprehend the different portions separately and conjointly. This does not, however, arise from any complexity, but from having so much to unlearn, for there is no agreement among observers as to their character and use; what we are taught by one great name to-day must be unlearned to-morrow.

69. With the external muscles of the eyeball we become familiar at once, for a single well-conducted experiment explains their use. In the human eye they are eight in number, six being outside and two inside. Five have their origin around the optic foramen, the sixth takes its rise at the outer edge of the *orbiter* process, the seventh encircles the inner margin of the iris, and the eighth surrounds the whole of the inner surface of the sclerotic, or first coat of the eye. The following description is from Hoblyn's dictionary.

70. I. 'The *rectus superior* arises from the upper part of the optic foramen, and is inserted into the top and fore part of the sclerotica. It is also called *attollens*, or *levator oculi*, because it raises the eye; and *superbus*, because it expresses pride. Its antagonist is—

II. The *rectus inferior* arises from the lower part of the optic foramen, and is inserted opposite to the preceding muscle. It is also named *deprimens oculi*, from its drawing the eye downwards; and *humilis*, to denote modesty.

III. The *rectus internus* arises from the margin of the optic foramen, and is inserted into the inner side of the eye. It is also named *adducens*, from its drawing the eye towards the nose, and *bibitorious*, from its directing the eye to the cup. Its antagonist is—

IV. The *rectus externus* arises from the margin of the optic foramen, and is inserted into the outer side of the eye. It is also named *abductor oculi*, from its turning the eye outwards, and *indignabundus*, as giving an expression of scorn.

V. The *superior oblique* arises from the optic foramen, passes through the ring of the cartilaginous pulley, which is in the margin of the socket, and is inserted into the sclerotica. It is also called *longissimus oculi*, from being the longest muscle of the eye; and *trochlearis*, from its passing through the trochlear or pulley.

VI. The *inferior oblique* arises from the outer edge of the orbitar process of the upper jaw bone, and is inserted into the sclerotica. It is also called *brevissimus oculi*, from its being the shortest muscle of the eye.'

VII. The sphincter, or circular muscle of the iris, surrounds the inner margin of the iris and forms the pupil.

VIII. The choroidal muscle, which takes its rise around the base of the optic nerve, completely surrounds the inner cavity of the eyeball, and terminates in the ciliary ring. Of these two muscles, the 7th and 8th, I shall speak more at length in separate chapters.

71. In the eye of the cod and other fishes the superior oblique passes *over* the rectus superior before it is inserted into the sclerotica, whereas in all those eyes which have the pulley and the posterior length of muscle, the superior oblique passes *under* the rectus superior. Why this is so cannot be explained, excepting that it serves better to regulate the motion of the superior oblique. The inferior oblique likewise passes *over* the rectus inferior.

72. Of the muscles of the eyelids it is not my purpose to speak, but those called lavator palpebra elevate the upper lids; the other, depressor palpebra, depresses, or draws down the lower lids, and the sphincter muscles of the eyelid contract the lids around their margin so as to shut out part of the light which falls on the pupil. In contracting the edge of the lids, the under one acquires a peculiar motion, being drawn towards the inner canthus of the eye. This answers a twofold purpose, to contract the lids and to draw sand and dust to the corner of the eye.

73. With respect to these eight muscles of the eyeball there is much dispute, which is the more remarkable as it is so easy to convince ourselves of their position and use. There is no part of the human system, not even the circulation of secretive matter, which has given rise to so much contradictory statement and speculation, as one muscle alone—the superior oblique.

74. I cannot tell how it may affect others, but to me the arrangement of these muscles is peculiarly interesting, and I consider them as the most extraordinary part of the visual apparatus. There is a sublime simplicity about it which is deeply impressive. At the very first lesson too, we are inducted in those great mechanical principles which assist in regulating the physical world—principles which nature applies to the highest and lowest purposes of life. He who can fully comprehend the mechanism of the eye and its appendages, may be assured of possessing knowledge which shall initiate him into much of the mystery of organization. If I could begin life again, the first thing that I should desire to know would be the anatomy and physiology of the eye.

75. I have said in the beginning of this treatise, that merely for the purpose of seeing an object directly in front of us, an eye of a tubular form would answer quite as well for vision as the round one we now have, and that the same apparatus could be adjusted to a tube without any other alteration excepting in the concavity of the parts. As we are constituted, however, having locomotive organs never at rest—with wants requiring constant gratification—and annoyed by difficulties at every step, it is necessary to have an eye of a globular form, attached to a slender, flexible neck, that every point of the field of view may be seen at a glance.

76. But the globularity of the eyeball and its flex-

ible neck, are not alone sufficient for all the purposes of vision, although there may be mind to direct the motions. The muscles, therefore, are added to the apparatus, and but for them the eye might as well be a tube. Without these adjuncts, we could still see the object when parallel with the axis of the eye, but if that object moved to the extremity of the visual angle, we should then be obliged to turn the head quite round in order to see it. Well may we, therefore, admire this beautiful contrivance of the muscles.

77. Before going into an explanation of their position and use, I must state that the eye has one imaginary and three real voluntary axes. Had philosophers been aware of the distinction between the real and voluntary and the imaginary and optic axes, all doubts respecting the motions of the superior oblique would long since have vanished.

78. The three real or voluntary and the one imaginary optic axis are as follows:—

I. The *vertical* axis—this rotates the eyeball from right to left.

II. The *horizontal* axis—this rotates it upwards and downwards.

III. The *circular* axis—this rotates it circularly.

IV. The optic, or imaginary axis—this has no rotation.

79. The six external muscles have nothing to do with the motion of the *iris;* they move the eyeball to the right and left, upwards and downwards and circularly, so that at whatever angle an object is placed, there is a muscle always ready to direct us to it without the necessity of moving the head or body.

80. The optic or visual axis of vision, is an imaginary line in the centre of the pupil, and through which a beam of light passes. The axis, of course, is a mere point, in fact it is inappreciable, but the beam of light or cone of rays is influenced both in magnitude of diameter and in density, by the motions of the muscles of the iris.

81. The external muscles, therefore, roll the eyeball on its voluntary axes, and the internal muscles are for the regulation of the intensity of light through the imaginary or optic axis.

82. Oysters and other animals of the like nature, are attached to their case, at one particular point, by a ligament, or what may be called a tendon. The fibres of this tendon are strongly cemented to the shell, and are with difficulty separated from it, unless the knife is used. In like manner the tendons which are attached to the extremities of the six muscles are firmly fastened to certain points of the bony orbit behind, whence they have their origin. They are equally well secured at the other ends of the sclerotic coat near its junction with the cornea.

83. But if this is wonderful, showing such divine skill, what shall we say of the long muscle—the superior oblique. Its origin, we perceive, is at the back part of the orbit, like the recti or straight muscles; but instead of following the same course, it rises slantingly above them and runs along the inner side of the orbit until it reaches the margin of the socket. Here it meets with a loop or pulley fastened to the bone, into which the muscle glides, and then, making an acute angle, it drops down on the eyeball where its tendinous extremity is spread out flat and is firmly united to the sclerotica. How much earlier would this use of the pulley have been known had men understood the mechanism of the eye.

84. What is also worthy of attention is a little gland, or sac, above the pulley, filled with an oleagenous secretion for the purpose of lubricating it! The muscle, therefore, is always kept moist and flexible, so that it can move with ease and be constantly ready for action. Now for what particular motion is this long muscle—the superior oblique—designed; certainly its office is very dissimilar and distinct from all the others. We must not, however, stop to inquire of the writers on visual optics, for scarcely two of them agree on this point. The only way is to examine for ourselves; in fact, it is an imposition, and we pay but a poor compliment to those who are to be instructed by such memoirs as these, if the knowledge we disclose is not the result of experiments made by ourselves.

85. I use the term *voluntary* axes, because there is no other so suitable to express my meaning. It is, in fact, a motion produced by the *voluntary* muscles, of which there are six, and created by our own mental effort, whereas the contraction and dilation of the pupil is produced by the *involuntary* muscles called the sphincter and choroid, through the axis of vision or optic axis. An internal agent, the mind, causes the external recti muscles to move, and an external agent, light, causes the motions of the internal iridic and choroidal muscles—of this latter part, I shall speak more at length in another chapter.

86. If we pull at the posterior extremity of the superior oblique with the forceps, it will simply rotate the eyeball on its *optic* axis, rolling it towards the nose, but that is not the peculiar natural action of the whole muscle during life. In fact, it is a motion *never* required under any circumstances. To rotate the eyeball on this axis would not serve any purpose of vision, and therefore it is never used—nor *could* it be effected, excepting in disease or in the dead eye. Of what consequence is it, therefore, to dispute about this or that mode of rotation, when we know that in the living eye this peculiar rotation either to the one side or the other, would never be required.

87. I imagine that one of the causes of such a variety of opinions regarding the true rotation of this muscle, is the manner of making experiments. If the muscles are dissected out clean, the eyeball has nothing firm on which to rest; and we can give it almost any motion. Again, if we pull at the muscle behind the orbit, through a hole made in the sphenoid bone, adjoining the optic foramen, scarcely any motion will be perceived, because the fatty parts and all the secretions are congealed, and do not allow of any delicate movements through them, either of nerves or muscles.

88. Even to get at *this* motion, the eye must be fresh and kept in water of such a temperature as shall prevent the congelation of the secretions, but as I said before, of what use is it, seeing that the superior oblique never is required to rotate the eye on the optic axis. In fact, although the recti perform their motions separately, without the least assistance from one another, yet the oblique muscles have no power to act alone, nor would there be any necessity to do so if they had the power.

89. Now the *real* motion of the two oblique muscles in the living eye, does not proceed from the assistance given them by the pulley, or in other words, from the aid of that portion of the superior oblique which lies between the pulley and the optic foramen. We find that the same motion is given to these muscles in those animals when the pulley is absent; in fact, I doubt whether the *posterior* half of the superior oblique is ever called upon to act in a sound eye, when its fellow has been blind for many years, or has been removed from the socket. Post-mortem examinations will perhaps disclose to us that the pulley in such cases is not required, and that from long disuse, the muscle is fastened to that spot, so that it becomes, as it were, the original starting place.

90. The particular uses of the *anterior half* of the superior oblique, in its separate, individual capacity, is to assist the inferior oblique to balance the eye and keep it in its place. That part of the muscle which runs from the pulley backwards to the sphenoid, is of no manner of use in effecting this object. There is no more difficulty in doing this without the aid of the posterior half of the superior oblique, then there is in the performance of the inferior oblique, which we know is without the pulley, and that this is the fact we have only to recollect that fishes and certain birds have no pulley.

91. As I observed before, the superior oblique muscle is not always accompanied by the pulley or cartilaginous loop; and, of course, it then derives its origin from the point where the pulley should be. In those animals which only have the ability to see

objects with one eye at a time—such as the cod, the bass, the goose and the duck, &c., there is no pulley, and the muscle takes its rise from the margin of the orbit. While investigating this subject, several phenomena presented themselves, which led me to reflect upon the uses of the pulley in certain animals. Accordingly, I instituted a series of rigorous experiments, on a variety of eyes, and the result was, as I anticipated, *that all animals without the power of bringing the optic axes of both eyes to bear upon an object in front of them, have no pulley to the superior oblique—that in this case the muscle is of the same length as the other oblique muscle, and has its origin at the precise point where the pulley should be!*

92. I do not pretend to the discovery that certain birds and fishes are without the pulley to the superior oblique, for it is referred to by most of the comparative anatomists, but the fact has never been connected with double or single vision. Not one author that has written on this branch of optics, has ever implied that the want of the pulley arose from the inability to use both eyes at once, or from there being no necessity for the posterior part of the muscle to have the pulley.

93. The question now required of me to answer is this—what is the most probable use of this additional length of muscle in the eyes of those animals having the power of bringing the axes of both eyes to the same focus. It must be very evident, however, to any one possessing the slightest knowledge of mechanical principles, that the pulley, and the additional length of muscle, are to give greater power to it—but for what purpose is this extra power required.

94. We perceive that in certain animals, the superior and inferior oblique although deprived of the trochlear or pulley, are quite sufficient to keep the eye well balanced—that is, they are so situated as to prevent the eyeball from sinking backward or projecting forward in the socket, which it would inevitably do if it were not for the two obliques. The four recti have no power to prevent such a recession or protrusion; on the contrary, they would rather cause the eye so to fall back or protrude. Perhaps this remark may be of some use when operating for the cure of strabismus. A young and rash surgeon may unwittingly sever the superior oblique at the moment he is operating on the rectus internus, and this mistake might produce a worse obliquity than the original one, for the eye would run up towards the inner canthus.

95. The pulley, therefore, is only necessary to those animals who bring both optic axes to bear on one point. The animal without the pulley looks at an object with one eye at a time; if he wants to see the same object with the other eye, he has to turn his head quite round. Is it not fair to presume that the pulley in the eye of men, the monkey, the owl, the ox and horse, and in other quadrupeds, having single vision with two eyes, is instrumental in producing that *contrary* motion which enables each optic axis to receive a cone of light from the same part of an object. To produce this contrary motion, an additional power must exist somewhere. *If this power exist in that half of the superior oblique behind the pulley, then must there be a correspondent power in the fourth nerve*—it must be an involuntary nerve.

96. Sir Charles Bell has very happily classed the nerves and muscles as voluntary and involuntary; perhaps the happiest suggestion which that branch of physiological science has ever received. Let me proceed cautiously, step by step, until I make it clear that certain nerves of the eye, hitherto considered as belonging to the voluntary class are involuntary.

97. The only difference that can be perceived in the muscles of the human eye and in certain quadrupeds, is the *retractor oculi* in the latter, for in other respects the muscles are the same. But *that* muscle, the retractor, as has often been observed, would be useless in the eye of men, as its position in the socket, overhung by the bone of the forehead, protects it from injury: whereas, in the horse, for instance, the eye is very much exposed. In the different movements of the muscles, however, this retractor, which completely surrounds the eyeball, behind, is in a quiescent state. It never acts but when the eye is to be drawn backwards towards the foramen oculi; it is therefore neither aid nor hindrance to the other muscles, whether their motions be simple or compound.

98. We perceive that when standing in front of an ox, both of his eyes are directed to us at the same instant, and that the nearer we approach, the nearer the optic axes of his eyes are brought together. If we advance closer than the focal distance which enables him to see an object single with both eyes, he turns his head and examines us with *one* eye. This does not proceed from fear, but to avoid the uneasy sensation which too near an approximation of the axes causes.

99. It is the same in men, when looking at an object *far off*, the optic axes are nearly parallel; but when this object is at the usual focal distance of twelve or sixteen inches, both eyes are perceptibly turned inwards, towards the nose. One who attentively examines this fact, will perceive that the axes are far from parallelism, and that when the object is *within* the focal point, the axes come so near together as to cause a squint. It not only produces a decided squint in both eyes, but there is with almost all persons an uneasiness and difficulty in making the attempt.

100. It is worthy of observation, that the muscle of one eye should be passive when the same muscle of the other eye is active. But it is quite as extraordinary that such muscles should be antagonists. For instance, the rectus internus of the *right* eye rotates it on its vertical axis towards the nose, while the same muscle in the *left* eye is passive and relaxed. But when *both* eyes move simultaneously, in a contrary direction, the consequence is that the rectus internus of the *left* eye has to assume the same contractility as that of the rectus internus of the *right* eye.

101. Now it is well known that whether the eyes are shut or open, either in the dark or in the light, both eyes move in the *same* direction on their *vertical* axes, and yet, at the same time, they are moving in a *contrary* direction also, in order that both eyes may see an object before them single.

102. That both eyes have power to move on a vertical axes in the *same* direction, is for the purpose of seeing an oblique object, and to see it singly, for notwithstanding that the eyeballs move to the extremest limits of obliquity, they also move, or are fixed rather, in a *contrary* direction, that single vision may be obtained by both eyes. This is the reason why both eyes observe such regularity of motion always in the *same* direction.

103. The man having both eyes perfect will find that when one eye moves the other will follow, and that the rectus internus of the *left* eye, for instance, can rotate the eye on its vertical axes so closely *inwards* as that the axis of vision will approach very near to the inner canthus. In the next instant the rectus internus of the *right* eye will bring the axis as near the inner canthus as the other muscle did, yet single vision is obtained even when the eyes were viewing the object so obliquely.

104. The man having one eye, the other being closed or destroyed, is in the same situation with the animal who has an eye on each side of the head. He can move his eye in every direction just as if both eyes were open or perfect, and he can do this in the dark and in the light with the eye open or shut. The four recti of one or both eyes, move in perfect freedom, and there seems to be no effort, although the same muscle is passive in one eye and active in the other. I hope that the explanation or statement is clear thus far, as the fact I have to disclose and for which all this minute preparation is made, is one of the most curious in this class of optical phenomena.

105. The muscles, therefore, of each eye are active or passive, as the eyes move either on their *vertical* or *circular* axis. This, however, only applies to the rectus externus and the rectus internus,

for the recti superior and inferior both move in the same direction downwards and upwards; my remarks, therefore, only apply to the vertical and circular axes.

106. But when light is present, and both eyes are open and perfect, a new power is given to certain muscles—the superior and inferior oblique. They are *involuntary muscles, and are acted upon altogether by light, and their office is to balance the eye, keep it in its place, and draw it nearer the nose.* Whether in those animals that see with one eye at a time, or with both eyes, it is the same; in the former case *one* eye is drawn nearer the inner canthus, and in the latter both eyes are drawn nearer the inner canthus. To perform this motion in a single eye is within the power of the superior and inferior oblique, without the assistance of the *posterior* portion of the superior oblique.

107. But to draw both eyes in a contrary direction, so that each eye, at the same time, shall be drawn towards the inner canthus, requires the aid of the pulley! By what power is this *contrary* motion effected? the muscles are put under great restraint, since it requires the aid of an additional length of muscle, and that this addition should run through a pulley to give more power to the effort!

108. What is the object of having the pulley at all, seeing that a single eye does not require it. It is for the purpose of seeing an object single with two eyes, when the rays from one object converge to the optic axis of both eyes.

109. A power, therefore, does exist for the purpose of producing this contrary motion, and the next question is whether it exists in the voluntary or involuntary nerves. By an effort of the *will* we can rotate the eyes on any of the voluntary axes, therefore *their* motions must be effected by the voluntary muscles, which are the recti. *But over the sphincter muscles of the iris and the two obliques the will has no control.* I shall prove that this is the case.

110. I have said that there is great diversity of opinion respecting the different organs and parts of the eye; of course the iris comes in for its share of uncertainty. But the point upon which there is the greatest dispute, is the *muscularity* of this membrane. Some writers contend that it has radiated muscles which dilate, and sphincter muscles which contract the pupil, while others deny that it is a muscular body at all.

111. No organ or membrane can be in a state of rest when a contractile force is to be kept up. If there were two set of muscles to the iris, the one to contract and the other to dilate, one or the other would be constantly in action, and there never could be complete repose. It is quite sufficient, for the purposes of vision, that there should be but one set of muscles to the iris—*for it is only when light is present that a contractile power is wanted.* Can light produce contractility in the muscles of the eye? I shall prove that it does.

112. It is not of much importance to the question —only that truth and precision are at all times desirable—whether the muscles of the iris consist of fibres running from the margin of the pupil to the circumference of the iris, like radii from a centre, or whether they run circularly around the pupillary margin, thus forming what is called a sphincter muscle. In my opinion, there is more propriety in assigning a contractile power to the circular fibres of the pupillary margin than to fibres radiating from this margin.

113. It is no objection to this opinion to state that in an artificial pupil the opening is made among the radiating fibres, and that contraction or expansion proceeds as regularly as when the pupil is in its natural state, although there may be distortion of outline. In answer, I observe that in almost every case, the artificial opening is effected by making an incision through the lower margin of the contracted pupil, and so downwards. We perceive, therefore, that the sphincter muscle of the old pupil performs its office to a certain degree even in the artificial pupil.

114. There can be no doubt, therefore, that the iris is bounded on its inner margin by a muscle or chain of muscles, the fibres of which run circularly, and that, of course, there must be a nervous apparatus attached to this muscle. Is there any other nerve distributed to the iris than those which are required for the contraction of the sphincter muscle? If so, what nerve is it, and how does it ramify?

115. At any rate, it is evident that the pupil contracts and dilates, and, in consequence, there must be a muscular and nervous apparatus to produce these motions. As we know that this contractile power is only brought into action for the purpose of regulating the diameter of the pupil, the natural inference is, that this is for the admission of more or less light. Therefore, the muscles of the iris receive all their energy from what may be strictly termed involuntary nerves; *the agent which acts upon them is light, and over them the will has no control.*

116. I know it will be said that some men have the power of contracting the pupil at pleasure, and Dr. Roget is cited as an instance; but this he will find is a mistake; he has no more power over the sphincter muscle of the iris than he has over the light which enters. We are all sensible that some pupils contract and dilate to a greater extent than others; Dr. Roget possesses this peculiarity, perhaps, in an eminent degree. We can convince ourselves that this is a property belonging to *all* pupils, by examining the eye when looking at near and distant objects; or even when half closing, or wide opening the eye, which acts will likewise dilate or contract it.

117. If we look at an object, on a level with the eye, at the farthest end of the room, and then look at the end of our finger held near the nose at the same level, so as to see it single, an observer perceives at once that the pupil dilates in the former act, and contracts in the latter. By repeating this experiment, he will soon satisfy himself that this change in the pupil is not effected by any power that we have over the iridic muscles, but that the act is induced by some agent beyond our control. This agent is *light*, and *it is owing to the longer or shorter angles of light proceeding from far and near objects, that the dilation and contraction of the pupil arises.* Dr. Roget looked from a far to a near object without being conscious of it, or he raised his eyebrows, or opened the lids wider, all of which acts will bring more or less light to the eye.

118. When we move the eye on its vertical, its horizontal, or its circular axis, we perceive, at once, that it is by an effort of our own. To be sure, the eye often moves without our having the least consciousness of it, but what I mean is that we can *command* these motions at all times. We often move our limbs without being at all aware that the movement is the result of an effort of the *will*. I should not, therefore, class the muscles which produce these acts, as involuntary at one time, and voluntary at another, for the *will* has the power to direct motion even when we are unconscious. *But the will has no power over the sphincter muscles of the iris.* No man can look steadily at the end of his finger, and make the pupil contract and dilate at pleasure. He may do it by casting his eyes *beyond* the finger, or by raising up his eyebrows and opening his eyelids widely, and an observer may not be attentive enough to perceive the change of the eye; but if the eye is immoveably fixed on the end of the object, let it be near or far, no power of his own can make the pupil dilate or expand, excepting, as I say, when he stretches open his eyelids to admit more light; and this, after all, is light, either more or less dense, and has the effect of contracting the pupil.

119. We find that light produces a contraction and dilation of the pupil by acting on the involuntary sphincter muscle of the iris; now on which of the six external muscles does it act so as to cause both eyes to move in a *contrary* direction. The recti move by an effort of the will, either in the light or the dark. Does the superior oblique move by a voluntary effort also, and can it be moved when in the dark?

120. But it is one act to move the sphincter muscle of the iris, and another act to move, or rather rotate *both* eyes on their vertical axis in a *contrary* direction. We perceive that we cannot change the diameter of the pupil by any *voluntary* act; but can we produce an approximation of the axes of both eyes by any will of our own? We cannot: let me prove it.

121. We observe that within a certain limit the *contrary* movement of the two eyes is attended with uneasiness, and frequently with positive pain. This proves that the whole act is one of constraint, and that the constraint is more or less perceptible as the angle of vision is more or less acute.

122. This uneasiness is not felt when only one eye is engaged in examining an object, for then it can be seen under any angle, even when the object is near the inner or outer canthus of the eye. I wish that this fact may be particularly familiar to the reader. Here is no pain, no uneasiness; for if one eye is shut, the other eye glides smoothly and agreeably to every point of the angle of vision, while the object presented can be held close to the eye, and there is no perception of an effort. There is no difficulty, therefore, in turning the eyeball so far inwards on its vertical axis as to see an object near the inner canthus; it is done without pain or uneasiness.

123. But should we want to see that object with BOTH eyes, at an angle even less obtuse, and see that object *single*, the effort is attended with positive pain, and the pain is only less perceptible as the object is removed to a greater distance. Now can we produce this contrary motion in a dark room when our eyes are shut, or when we are in the dark, although the eyes may be open? We cannot. *To produce a contrary motion in the vertical axes, light must fall on the pupil, or on the eyelids*; or, in other words, we cannot squint with both eyes open when we are *entirely* in the dark, or when our eyes are shut in a dark room!

124. When the fingers lightly touch the cornea of each eye, we can feel the motion of the eyeballs through the closed lids. It will be found that by no effort of the will can we produce a contrary motion in the two cornea. If one little bulb moves to the right, the other moves to the right also. Various have been the attempts by many persons, to oblige the two axes to approach each other, when the eyes were shut in a *totally* dark room, or with both eyes open when in the dark, but without accomplishing it. It rests, therefore, as an incontrovertible fact, that *light* is necessary to move the eyes so as to produce the phenomena of seeing an object single with *two* eyes, and of contracting and dilating the diameter of the pupil in double or single vision.

125. We find that light produces a contraction and dilation of the pupil, by acting on the involuntary sphincter muscle of the iris; now on which of the six external muscles does it act, so as to cause both eyes to move in a *contrary* direction. The recti move by an effort of the will either in the light or the dark: does the superior oblique move by a voluntary effort also, and can it be moved when in the dark?

126. It has long been known that the superior obliques have the fourth pair of nerves allotted to them, and until very recently, it was supposed that this nerve was provided exclusively for the use of this trochlear muscle. It is now and then said by one philosopher or the other, that a small branch goes off to some other muscle, and I suspect that a still closer investigation will show us that part of this branch *does* go off from the nerve before it is distributed over the middle part of the superior oblique.

127. When the superior oblique is without a pulley, as in the cod and the goose, it takes its rise at the point where the pulley is in other animals, and the fourth nerve enters the muscle at this point. But when the muscle has its origin at the same place where the recti originate, the nerve, which pierces the sphenoid near the optic foramen, runs along the muscle from its commencement. It is apparently lost in the centre of the muscle before it enters the pulley, though it has been traced further by several anatomists. In one place Sir Charles Bell says that the fourth nerve is entirely given to the superior oblique, and asks what office it can have in reference to that muscle. In another place he states that a twig *does* branch off from it to some other part.

128. The rectus internus is a strong muscle, having its posterior termination forked, or divided; each end of this termination is firmly fastened to the bone by means of a tendon, and this muscle also—like the superior oblique—has a nerve exclusively devoted to it.

129. The principal reason why these muscles are so much stronger than the others, is that they have double duty to perform; for when the eye moves obliquely to the right, the rectus externus has to overcome the resistance of the superior oblique and the rectus internus.

130. One eye always follows the other, even when the object under examination is at the extremity of the visual angle; but though this is the case, yet only the eye nearest the object sees it. If we cast a side glance to the left, as far as the rectus externus will contract itself, and then shut the eye, we shall perceive that the *right* eye was useless, as the nose prevented the rays from the object from entering the pupil. This, however, is only in particular cases, when we do not want to turn the head, for in general, taking in a certain number of degrees, both eyes are useful in oblique vision.

131. By this united action, this combination of forces, the eyes are enabled to move in the *same* direction. We may very readily understand, therefore, that there must be equivalent forces of great power to move both eyes in a contrary direction; this is the reason why the pulley is added to the superior obliques. For as it required such great strength to overcome the united action of so many muscles, an additional power was wanted to counterbalance it; and this power was entrusted to that portion of the superior oblique muscle which has its origin at the back part of the orbit.

132. The power, therefore, of moving the eyeball on its vertical axis, is delegated to the rectus externus; its antagonist—the rectus internus—being merely passive, allowing itself to contract and expand at the pleasure, so to say, of the rectus externus. This is plainly seen in the eye operated upon for strabismus, for here the rectus externus of the one eye has to move the eyeball entirely by its own strength, as the rectus internus of the other eye is in no condition, for several days, to assist in the action.

133. But at the same time that the rectus internus is in a passive state under such circumstances, it is not incapacitated from voluntary contraction when the muscles of the other eye are useless. When one eye is diseased or entirely lost, the nerves and muscles of the sound eye gain additional power. It is the case with all the nerves and muscles of the body; if the right hand is disabled, the left hand will soon accommodate itself to the use of the scissors, the knife, or the pen, although the muscles were never called upon before to act in such cases. We never should lose sight of the fact that the senses have duplicate organs, and that *sight* is in no way different from smell, taste, and hearing, in this particular. The organs of light are more conspicuous than those of the other senses; and from their great service—for what are we without eyes—we are led more to speculate upon them. All the double organs of sense act in unison; they originate on the same base within the cranium, and their muscles move simultaneously. Excepting in disease they must act in concert, or there would be confusion.

Insects voided with Urine.

The specimens kindly forwarded us by Dr. R. S. Hopper, of Leeds, which are stated to have escaped in large quantities *per urethram* from a female, appear to belong to the larva of a Dipterous insect of the genus *Stratiomis*, (Westw. Classif. Vol. II., p. 551.)—*Microscopic Journal.*

LECTURES.

A COURSE OF LECTURES
ON
Diseases of the Chest, Percussion, and Auscultation.

BY

JOHN A. SWETT, M. D.

Delivered at the College of Physicians and Surgeons, New York, during the Spring Session, 1842.

[REPORTED BY THE EDITOR.]

Lecture XXII.

Tubercles in the Lungs.

GENTLEMEN :—

The various diseases of the lungs which we have hitherto been studying are either simple changes of the natural structures, as hypertrophy of tissue, dilatation of cavities, or the effects of simple inflammatory action, as congestion and the effusion of serum, lymph or pus into the substance, or upon the free surfaces of these organs. Now there is an entirely distinct class of organic changes, consisting in the deposit of new matter into the tissues of these organs, substances entirely distinct from all the normal component structures of the body. They are the *heterologous formations*, and are principally these four—carcinoma, in which I include encephaloid deposit,—melanosis,—the gelatiniform deposit, or the *matière colloïde* of the French pathologists,—and lastly, *turbercle.* These deposits are by many thought to be destitute of organization, but this is probably a mistake; they belong to the class of malignant deposits,—that is, they cause the more or less rapid destruction of the parts they attack, and are liable to be reproduced under the influence of constitutional causes. The most important of these formations is tubercle, which, when seated in the lungs, constitutes the disease we know as phthisis, or pulmonary consumption, and which we will now proceed to consider, and, as I hope, with attention on your part, for you will constantly find in practice, the necessity of thoroughly understanding it. [A fine recent specimen of the lungs in the different stages of the disease, was exhibited to the class.]

Tubercles in the lungs present three distinct stages, which are easily recognized and commonly found existing at the same time; for this deposit does not take place all at once, but in successive crops, if I may so speak, during the progress of the disease. Thus we commonly find in the lungs of those who die of this disease, rounded granulations varying from the size of a pin's head to that of a small pea, semi-transparent and grayish in their aspect; sometimes scattered irregularly through the pulmonary tissue, at other times clustered into masses and possessed of considerable firmness, so that when the finger is passed over them they feel like small shot imbedded in the surrounding lung, the pulmonary tissue itself being frequently perfectly healthy, or at least only a little compressed by the deposit into its substance. These little bodies are the miliary tubercle, or the first stage of the tuberculous deposit. Sooner or later, the time being very variable, these grayish semi-transparent granulations undergo a change—they tend to become yellow and opaque—usually a small yellowish speck is noticed in their centres; sometimes, however, upon their surface. This gradually enlarges until it invades the whole tubercle, which has also during this period been tending to increase in size. This constitutes the second stage, or that of the yellow opaque tubercle. And here also we not unfrequently find the surrounding pulmonary tissue, as well as the bronchial ramifications, in appearance healthy, although there is often also evidences of more or less inflammatory congestion. Finally, the necessity for the evacuation of this yellowish opaque matter arises, the mass begins to soften, the surrounding parts inflame and ulcerate, suppuration follows, and an abscess is formed, containing softened tuberculous matter and pus, which commonly ulcerates its way into a neighboring bronchus, is expectorated, and thus a cavity is finally formed. This is the third stage. This cavity, in the earlier period of its formation, is surrounded by lung sometimes in a state of inflammation, or more frequently indurated by the tuberculous deposit less advanced. In older cavities, however, we find a lining false membrane, at first imperfectly organized and friable, but which in the progress of time becomes organized and firm, and even fibro-cartilaginous. I have seen, however, the old cavities lined by a membrane soft and velvety in its texture, like an ordinary mucous membrane.

These cavities, formed by the softening and discharge of the tuberculous deposit, are sometimes small and rounded, as if they had contained a single tubercle; but more commonly they are large and irregular in shape, as if formed by the breaking down of many tubercles into a common centre. They are also frequently intersected by firm bands, which are the obliterated vessels of the part less disposed to ulcerate,—a wise provision of nature to prevent hæmorrhage. Now a fact of great importance which I wish to impress on your minds is this. These old cavities lined with a fibro-cartilaginous or mucous membrane and communicating with the bronchial tubes, may remain (if single, or if no new deposit takes place) for an indefinite period, perhaps for life, secreting a little mucus or serous fluid without causing irritation or other disturbance in the functions of the lung—they may be regarded as a mode of cure. More often, however, we find these cavities contracting and becoming obliterated, like a common abscess, and a cicatrix is formed. This is not a very unusual appearance in the lung. We find the external surface of the lung presenting a peculiar puckered up appearance, and the surrounding parts firmer, less aërated, and darker than natural, from the pre-existing chronic inflammation. If we cut into these portions, we find white lines intersecting each other; and if we trace them, we shall find one or more terminating in a bronchial tube which has been ulcerated and partially obliterated. This again may be regarded as a more perfect form of cure.

But this is not all we notice We not unfrequently find, especially in the lungs of old persons, what are called *chalky concretions*—yellowish white, friable, gritty masses, usually of small size, which are nothing more than portions of tuberculous matter deprived of its watery particles—the surrounding pulmonary tissue being more indurated and darker than natural; an evidence of previous chronic irritation, and not melanotic in their character, as some have erroneously supposed. Again, these chalky concretions are commonly encysted, a mode, as you know, which nature adopts to quiet the irritation of foreign deposits in our organs; indeed, there can be no doubt that in many instances, at least, these deposits were made years ago, perhaps in early youth, and had given no evidence of their existence for a very long period of time.

You will learn from these remarks, gentlemen, the important fact that phthisis is not necessarily an incurable disease; indeed, that we must regard those different processes above described, as so many successive efforts on the part of nature to remove a morbid deposite from the system, and it could be wished that she was more often successful. It perhaps seldom happens that the first deposit is fatal to life; the difficulty is that successive deposits are frequently taking place, which become a new source of irritation, gradually destroying the lungs, and thus exhausting the vital powers.

The tuberculous matter is not always found in the form of the distinct granulations already described; it is sometimes infiltrated into the pulmonary tissues in masses of different size, so that portions of a lobe, a whole lobe, or even a whole lung, may become indurated, unaërated, and thus entirely unfit to perform its functions. In this case, however, we notice no material difference in the progress of the tuberculous deposit. As in the former instance, the infiltrated mass is at first firm, grayish, and semi-transparent; by-and-by small yellow and opaque spots appear in its substance, which gradually increase in size; these again soften, ulceration and suppuration ensue, and tuberculous abscesses are formed. Not unfrequently indeed the two forms are found in the same lung—the infiltration is particularly common about the walls of cavities in the lungs.

Again, Laennec has described another form of infiltration, consisting of a rosy red jelly-like mass, less transparent and softer than the common tubercular infiltration, which he regards, however, as of the same nature, and states that it undergoes the same change; but perhaps this is more than doubtful,—it is, at all events, a very rare deposit.

Finally, in certain rare instances, we find in the lungs small bodies, rounded or oval, all nearly of the same size, semi-transparent and yellowish white in color, equally scattered throughout the whole organ. These are the granulations of Bayle, for Bayle first described them and considered them as accidental cartilages, to which structure they certainly bear some resemblance. Much doubt, however, exists as to their real character. Laennec regarded them as a form of tubercle; Broussais considered them as enlarged lymphatics; and Andral as distinct air vesicles filled with lymph, and states that they are red and soft before becoming hard and white; while finally, M. Louis does not mention them at all, from which I infer that he has never seen them. I have myself met with two instances of this form of granulation.

Let us next inquire into the *seat* of the tuberculous deposit. The probability is that it may be deposited in or upon any of the pulmonary tissues; although reasoning from analogy, we should expect to find it most frequently deposited in the common cellular tissue of the lung, and this is probably its usual seat. Dr. Carswell, however, thinks that its favorite place is the free surface of the mucous membrane; and others, as Adral, that it is the air vesicles: but this is of comparatively little importance. There is, however, one fact in relation to the seat of the tuberculous deposit which should never be forgotten; it is one of those leading facts that are constantly available, nay indispensable, in the diagnosis of these diseases; it is this, that tubercles have their primary and principal seat in the *superior portion of the lung*, and anteriorly rather than posteriorly, and that the different changes which these bodies undergo commence and advance from above downwards. Thus as a general rule we find in cases that have terminated fatally, cavities at the summit of the lung, yellow tubercles in the central portions, and gray semi-transparent granulations lower down. If you find these latter about the summit of the lung, and in the neighborhood of cavities, you may be sure that they are of a late date, for you will recollect that these bodies are not deposited all at once, but in successive crops as the disease progresses. This rule as to the development of the disease in different portions of the lung is so nearly universal that I have yet seen but one exception to it. In this case there was a cavity about the centre of the lung with yellow and gray granulations in the lower portion, while the upper part of the lung was entirely free from the disease, or nearly so. M. Louis, I believe, has never met with more than two or three of these exceptional cases.

What are the *causes* of the tuberculous deposit? This is manifestly a question of the first importance, and it is much to be regretted that we can answer it so imperfectly. The French observers who have done so much for the pathology of this disease, have succeeded far less in their explanation of its causes—unless we are willing to adopt the wholesale theory of Broussais, that inflammation is the grand cause. Sir James Clark, an English writer, regards the disease as dependent upon a cachectic state of the constitution, which he regards as identical with the strumous or scrofulous diathesis,—characterised, especially in children, by a pale, pasty appearance of the countenance in those of a light complexion, or by a sallow look if the complexion be dark, full cheeks, nose and upper lip tumefied, muscular fibre lax, digestion weak, and skin dry. Now admitting, as I am ready to do, the fact that tubercles are most commonly met with in those of a scrofulous diathesis, let us be careful and not deceive ourselves with the idea that this is any explanation of the cause of tubercle; for if tubercle and scrofula are identical, we may ask at once what is scrofula. Now scrofula is only a convenient name for a certain combination of external conditions which does not let us at all into the mystery of their production, so that we are as far from knowing the real cause of the tuberculous deposit as ever.

But if a cachectic state of the system is the true disease, as Dr. Clark thinks, and the tuberculous deposit only the consequence of that state, we ought certainly to be able in most or many cases, at least, to ascertain this condition—but I doubt whether this can be done. We certainly often meet with patients who become affected with the tuberculous disease, yet whose general health has suffered no such premonitory change. We sometimes find persons suddenly seized in a state of perfect health, of robust, vigorous constitutions, and what is a little remarkable, I have almost constantly noticed that such cases progressed much more rapidly than those in which the individuals were of a more delicate frame. Very likely deteriorating influences, such as late hours, dissipation, and the like, among the rich, as well as bad food and air, dampness and exposure among the poor, may exert a certain and important part in the production of this disease; yet we so often see it prevailing among those who are exposed to none of these influences, among the the middling classes of society for instance, in town and in country, among those who are robust as well as in those who are more delicate, that too much stress should not be laid upon their operation.

The influence of *age* on the deposit of the tuberculous matter is a consideration of great interest, and for our knowledge on the subject we are especially indebted to M. Pafoovine, of Paris, and M. Lombard, of Geneva. From their inquiries it would appear that the disease is far more prevalent among children than has been commonly supposed, and that more than one-fourth of those who die are tuberculous, although this deposit is not the direct cause of death in more than one-sixth. The period of the greatest frequency of this deposit among children is from the fourth to the seventh year, while it is by no means uncommon before and after this period except during the first year, although I, in common with many others, have seen the lungs of children who died soon after birth loaded with tubercles. In adult life age also exerts a most remarkable influence on the production of this disease. All observers acknowledge its greater frequency between the age of twenty and thirty years, when the proportion, embracing Great Britain, Paris, and Berlin, and probably our northern Atlantic cities, is about one to three and a half, while from fifteen to twenty years it is only one to ten; after thirty years the mortality again diminishes, so that among those from fifty to sixty years old, the mortality is less than one in nine, and still less even after this period.

Does sex exert any influence on the production of tubercles? Statistical observations would seem to prove that it does not

In speaking of chronic bronchitis I entered fully into a consideration of the influence of certain trades and professions in the production of this disease. Now while it is sufficiently clear that certain trades, especially those which expose the operatives to the inhalation of dust, particularly of metallic dust, constitute a powerful predisposing cause of chronic inflammation of the bronchi, and even of pulmonary disorganization; it does not appear equally certain that they induce the deposit of tubercles in the lungs. I shall soon have occasion to remark that bronchial irritation does in certain cases, comparatively rare, however, appear to exert some influence in exciting this deposit into activity when quiescent, but this is another question entirely.

Again, what is the influence of climate on the production of this disease? It is the commonly received opinion that cold and damp and variable climates, as the north-western portions of Europe, and the north-eastern portions of our own country, are particularly subject to tuberculous diseases, and this I believe to be the fact. Yet we would err greatly in supposing that the disease is confined to these regions. Dr. Clark is even of the opinion that great heat is a powerful predisposing cause of tuberculous disease, and founds his opinion on its great prevalence among the natives in the East and among the blacks in the West Indies. Indeed according to Mr. Marshall's statistical tables, the disease is more common among the natives in the former region than among the white population. Thus it would seem that no quarter of the world is exempt from the ravages of this wide-spread malady, although it is less prevalent in temperate and equable latitudes. It is said that our Western States are remarkably free from this disease, and that it prevails but little in districts where intermittent fever is endemic; but we require more information than we now possess to ascertain the truth of these positions.

Another very important consideration in relation to the causes of pulmonary tubercles is, whether inflammation is to be regarded as the common cause. If we adopt the common opinion in the profession, as well as that of many professed pathologists, we shall admit that it is; but if, on the other hand, we examine the facts that are before us, we shall, I think, come to a very different conclusion. For my own part I am entirely persuaded that inflammation plays only a secondary part in this disease, and that it is the mistaking effects for causes that has led so many into error. It is true that if we examine a tuberculous lung in a fatal case that has gone on uninterruptedly to its termination, we find abundant evidences of inflammation. We find inflammation of the pleura and of the bronchi—of the substance of the lung itself, especially in those portions where the deposit is most abundant and advanced; we find also ulceration and suppuration, evidence beyond doubt of inflammatory action; and hence are led to adopt the hasty conclusion that this inflammation is the grand cause of all the changes we notice. But on the other hand how often do we examine bodies in which we find abundant evidence of the early stage of the tuberculous deposit without any evidence at all of even co-existing inflammation—miliary tubercles scattered through the lungs, perfectly free from the slightest evidence of inflammatory congestion even? And let me ask you, if inflammation had caused this foreign deposit, would it not be contrary to all known analogy to suppose that it would cease entirely while that deposit remained a constant source of irritation? I think so. But again, where does inflammation of the bronchial membrane, and especially of the substance of the lung, have its seat? I have already shown you from abundant evidence that its usual seat is the lower posterior portion of the organ; so that were this inflammation the frequent cause of the tuberculous deposit, it would have its seat in the same portion of the lung. The *exactly opposite* of this is true; tubercles have their favorite, nay almost universal seat in the summit of the lung, as far as possible from the common seat of pulmonary inflammation. Again, there is another fact which is strongly corroborative of the above statement. I have already told you that after the age of forty years pneumonia affected the summit of the lung in about half the cases. Now it is at this period that the tuberculous deposit becomes less frequent, and actually diminishes in proportion as the disposition to the occurrence of pneumonia in the summit of the lung increases.

And now, when we examine the general and rational signs of this disease, what do we find in support of these different views? The advocates of the inflammatory doctrine will tell you that the tuberculous disease is more prevalent in cold, damp, and variable regions, where pulmonary inflammations are most rife. This is true, but not to the extent commonly supposed, and as we have already stated—that it often appears to follow directly inflammatory attacks, especially those of the bronchial membrane. This is also true in some cases, but not in a considerable proportion of the whole number; so that the inflammation may be regarded rather as an occasional exciting cause of *tubercular activity* when the deposit has already taken place, than as the actual cause of the deposit itself. Again, they tell us that symptoms of irritation, and even of inflammation, attend the earlier periods of the disease, that the pulse becomes accelerated, that febrile reaction ensues, and that more or less pain is present. This is perfectly true; but we must at the same time remember that there is a great difference between irritation and inflammation as simple states, although they are often combined and pass into each other.

That irritation in these cases tends to pass into inflammation, which brings with it all its usual consequences, is beyond a doubt; but that even the irritation *preceded* the deposit of the tuberculous matter, is by no means proved; at all events, we often find this deposit without any evidence that such a condition had existed. Indeed, the little influence which inflammation exerts in the production of this deposit, is every now and then apparent. This very morning a gentleman called on me from the country. During the last few years he has had two attacks of severe pulmonary inflammation of the left side, which have left that side weak and subject to pain. In March last he had a different attack, which was undoubtedly of a tuberculous nature; yet so far from affecting the weak lung, the seat of the previous inflammation, it has attacked the other lung. This appears to me a strong case in point. The truth is, the symptoms of irritation are those which first develope themselves in pure and well marked cases of tuberculous disease—the dry hacking cough, often so slight as hardly to attract notice, the oppression and uneasiness about the chest, the slight acceleration of the pulse, especially at evening—these are very different from the symptoms which attend the onset of inflammation, even of bronchial inflammation, where the cough is marked, the expectoration early established, and the febrile reaction more distinct at the commencement than at any subsequent period. I hope, gentlemen, that these views are as convincing to you as I believe they should be to every candid enquirer. They afford us a fine illustration of the value of pathological knowledge, in illustrating that most difficult of all subjects, the etiology of disease. He who has attempted such investigations, and waded through the immense mass of mere speculation that has crowded our medical works on the subject, may well say with the Latin poet—

> 'Felix, qui potuit rerum cognoscere causas.'

If, again, the views we have adopted are correct, they teach us one great and most important practical lesson, not to be too hasty in treating these cases in their incipient stage, as if dependent on inflammatory action. Be careful how you bleed and reduce a patient who is suffering from the mere irritation of a disease which will, as soon as it progresses, require all the vigor of constitution, all the powers of resistance, that nature and art can command. Indeed, I cannot better close this subject than by presenting to you the opinion of Dr. Latham, of London, which I think conveys an exact idea of the case before us, and may serve to impress it more strongly on your minds. You have all seen an absorbent gland of the neck become as hard and as large as a marble, but without pain, heat, or discoloration of the integuments, and remain in this condition for months and years—it is a mere deposition of tubercular matter in the substance of the gland—but at length heat, pain, and redness have ensued—what was before hard has now become soft; the integuments have burst, pus has been discharged, and with it a nucleus of tuberculous matter; and the parts are finally restored, without any external mark of injury save a slight scar. Again, you have seen many glands of the neck simultaneously or *successively* go through the same, and the inflammation of the substance of the gland has not gone further than was necessary for the diminution of the tubercular deposit; but in other cases the inflammation is much more extended—the whole subcutaneous tissue of the neck is affected; what takes place on the surface of the body, allowing for the difference in texture, occurs also in the lungs, and constitutes *Consumption*.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, October 22, 1842.

We attended the meeting of the association of 'Alumni of the College of Physicians and Surgeons,' which was held last Tuesday, and were greatly satisfied by what we saw and heard. The fraternal cordiality—earnest love of truth—enthusiastic devotion to their profession—and scientific attainments of the members of the Society, were manifested in an eminent degree. Professors PARKER, GILMAN, WATTS, FRANCIS, and other distinguished members of the profession, were present, encouraging their young brethren by their presence, and contributing to the common fund the results of their experience. We augur very favorably for the future prosperity of this interesting association, and have no doubt that it will exercise no unimportant influence in advancing the great cause of medical science. A considerable portion of our space this week is cheerfully devoted to the publication of the following interesting papers read before the society, which have been placed at our disposal. Considering the youth and opportunities of the authors, we do think that the 'Transactions' of this Society are very creditable.

STATISTICS OF FORT FAIRFIELD, MAINE.

[FROM DR. COOLIDGE, U. S. A.]

Nearly one year has elapsed, since a few graduates of the College of Physicians and Surgeons, of the University of the State of New York, with yourself at their head, formed an association for mutual improvement in medicine and its collateral sciences.

Being fully aware of the importance of even trifling contributions in the infancy of all literary associations, I have presumed to offer, in the absence of more interesting matter, a few remarks on the topography of this place, and also a leaf or two from my note book, on the pathology and treatment of delirium tremens and variola.

Fort Fairfield is situated on a commanding eminence on the south bank of the Aroostook river; lat. 46 deg. 50 min. N., lon. 9.1 deg. 48 min. E., two miles W. of the boundary line as surveyed by the United States, and upwards of two hundred miles from the sea. The land in the vicinity of the fort is rolling, swelling into elevated ridges, and with the exception of the immediate banks of the river, covered with a dense forest. The soil is alluvial, abounding in limestone, and uncommonly productive. The water, both of the river and springs, is strongly impregnated with lime. A rich bed of iron ore was discovered, within twenty miles of the fort, by Dr. Jackson, while engaged in the geological survey of the public lands of Maine.

Being the pioneer of my profession, it is impossible to furnish any medical statistics. From conversation with the oldest inhabitants, I cannot ascertain that any disease has extensively prevailed. It is only a year or two since intermittent fever was first observed, and at present the cases are very few. Several cases of sporadic dysentery have come under my notice. In general the settlers are uncommonly healthy. They are of a class hardy and industrious; many, however, are very intemperate, their log cabins presenting scenes of wretchedness and misery hardly exceeded in New York. They are very illiterate, and their children have no means of obtaining an education. The thermometer, for the month of December, ranged from 40 above to 9 below zero. The mean temperature of the month being 21. In January the mercury ranged from 45 above to 24 below zero—the mean being 10-17. In February from 44 above to 18 below—mean being 17-23. The prevailing winds are the west and north west.

The following articles of the materia medica, noticed in the U. S. Dispensatory, are to be found in the immediate neighborhood of the fort:—pinus canadensis, pinus balsamea, pinus nigra, betula papyracea, acer saccharinum, uniperus virginiana, epifagus americanus, salix viminalis, prunus virginiana, coptis trifolia, asarum canadensie.

PATHOLOGY AND TREATMENT OF DELIRIUM TREMENS.

The existence of two distinct varieties of delirium tremens, appears to have been overlooked by most writers on this affection; and I do not recollect that it was noticed in the lectures on the subject when I attended college. In the extract from Dr. Watson's clinical lecture, published in the New York Medical Gazette, Dec. 1st, 1841, reference is made to 'mixed cases of inflammation of the brain coinciding with delirium tremens, and which require opium on the one hand and moderate depletion on the other;' but the only author (I write from memory and without access to books) who distinctly makes the two varieties, is Dr. William Stokes, of Dublin. (Vide Lecture on Gastritis.)

Of these two varieties, one arises from a want of the accustomed stimulus, the other from excessive use of alcoholic stimuli, in persons not habituated to them. The former is always to be met with in hospitals, occurring either in constitutions impaired by long continued and excessive stimulation, or in persons who, habituated to the daily and excessive use of intoxicating liquors, are suddenly deprived thereof. The latter is rarely if ever seen in hospital practice, and is therefore liable to escape the notice of the student. It occurs after a continued debauch, in persons not accustomed to intoxicating draughts. A man, known to be a habitual drunkard, receives a slight injury, for which he is admitted to the hospital; in a day or two he is attacked with delirium tremens. A fine, healthy, robust countryman comes to the city, and yielding to the temptations which surround him, plunges deep into all kinds of dissipation. In less than a month he is attacked with delirium tremens, and admitted to the same hospital. Is the pathological condition the same in these two cases? We think not: and that consequently different modes of treatment should be adopted. In the lecture referred to, Dr. Watson observes—'Pure delirium tremens often leaves behind it no morbid appearance whatever in the brain, or its membranes;' to which may be added, the only morbid appearances are in many cases insufficient to account for death—being confined to the chronic gastritis and diseased liver, usually found in habitual drunkards.

The second variety, which may be correctly termed the sthenic, has for its pathological condition at the commencement of the disease, gastritis more or less acute, complicated with a peculiar alcoholic irritation of the brain; this irritation is increased by the extraordinary sympathy which exists between that organ and the stomach, and if not properly treated, soon leads to active inflammation. After death we find, as Dr. Stokes observes, and ourselves witnessed, 'unequivocal marks of inflammation in the brain and stomach.' The treatment to be pursued in these two varieties must necessarily differ in some respects. For the first variety, we prefer the plan of treatment adopted in the Bellevue Hospital, during our service, under Dr. Alexander F. Vaché, and which, considering the kind of patients received into that institution, was attended with a fair average success.

On admission, if the tongue was furred, if there was nausea, or in the absence of these symptoms, if he had recently partaken of food, an emetic, commonly of ipecac, was administered, followed by ℞. Pulv: Rhei: Calcd: Magnesia, āā. ʒj.; Aqua Menthæ Piperitæ: ℥iv. Fiat mistura. If this failed in producing free catharsis, the dose was repeated. If the pulse was full and frequent, the delirium excessive, a large dose of senna, salts, and manna, was given in lieu of the eccoprotic mixture, and at the same time cups were applied either to the temple or epigastric region, or both, and from iv. to vi.℥ of blood abstracted. This treatment generally produces some marked debility. Opiates, combined with stimulants, were now administered. A large dose of morphia was generally prefered, or from 80 to 100 drops of laudanum given in a pint of porter, a stimulus which we greatly prefer in this disease. Often the first dose given in this way would produce the desired effect; but if not, the porter and opium was continued until their legitimate effect was produced—attention being paid to the general condition of the patient. It was deemed advisable to avoid, as much as possible, all physical and mechanical restraint. When circumstances permitted, the patient was placed in a private apartment, care being taken to remove every thing with which injury could be inflicted, and to exclude the light.

The peculiarities of treatment recommended in the second variety, consist—1st. In the employment of venesection. 2d. In the application of leeches in preference to cups. 3d. In applying cold to the head. 4th. In the use of narcotics uncombined with stimulants. Of these, all but the first are of admitted utility, but there are very few practitioners who have employed venesection in the treatment of this disease. We recommend the moderate and judicious employment of the lancet at the onset of this disease, when it occurs in young, robust constitutions; and we do so with more confidence, from having witnessed its efficacy in our own practice, as well as in that of our preceptor, Dr. Richard K. Hoffman, who has remarked in our presence, 'that he never lost a patient with delirium tremens when he had employed the lancet; but he has lost cases, as he believes, by neglecting that remedy, and the too early use of opium.' Nothing so well prepares the system for the successful administration of narcotics as moderate venesection; produce a little *real* debility, and a comparatively small quantity of opium exercises its legitimate and happy influence. We must not be considered as advocating venesection in all cases of what we have denominated the second variety of delirium tremens. On the contrary, in most cases, leeches are preferable, producing the effect desired without resort to the lancet; but there are very many situations in which the practitioner is unable to obtain them, and then we unhesitatingly recommend the judicious employment of the lancet.

We have, in conclusion, to offer the statistics of the cases of delirium tremens, admitted to the Bellevue Hospital, from June 1st, 1839, to June 1st, 1840. In judging of the propriety of the treatment from the results here stated, regard must be had to the kind of patients usually found in an Alms House Hospital; to the number of times some of the patients had suffered from this disease; and to the fact that several of the fatal cases had been under treatment two or three days prior to admission.

In the year above mentioned, 46 cases of delirium tremens were admitted into the Hospital. Of these patients, 17 were natives of Ireland, 9 of England, 4 of Scotland, 1 of Germany, 11 of New York, 3 of Massachusetts, and 1 of Vermont. 5 were 50 years old and upwards, the greatest age being 56; 13 were over 40 and under 50; 23 between 30 and 40; 5 between 20 and 30; none under 20. Of these, 28 recovered; 18 died. Of the deaths, 1 occurred in a patient over 50; 3 in patients between 40 and 50; 11 between 30 and 40; and 3 between 20 and 30. Four deaths occurred within 18 hours after admission; five in patients who had previously suffered two or three attacks of this disease. Deducting the four deaths occurring on the day of admission, from the number of cases reported, the ratio of deaths is as 14 to 42, or exactly 1 to 3.

VARIOLA.

While assistant physician to the Small Pox Hospital, Bellevue, my attention was directed by the resident physician, Dr. Alexander F. Vaché, to the pathology of variola, especially the condition of the alimentary canal. A number of examinations were accordingly made, in some of which I was assisted by Drs. John Osborne and Philip A. Davenport. The result will be found below.

I shall not occupy your time with the detail of the cases, but giving the general statistics of the Hospital, and the treatment ordinarily adopted, will proceed at once to the pathological appearances observed. It may be interesting to some, who have yet to be exposed to this disease, to know that the writer, relying on the protection afforded by *re*-vaccination, was for one year daily exposed to the contagion of variola, spending hours together in attendance on the sick, and in the examination of the cadaver, without suffering a moment's sickness. This was the case with the other assistant physicians who resorted to revaccination; while three gentlemen among them, one of the physicians, relying on the protection afforded by vaccination performed antecedent to puberty, were attacked with the disease soon after exposure.

From June 1st, 1839, to June 1st, 1840, 90 cases of variola were admitted to the Hospital, viz:—62 white, 28 colored. Males 58, females 32. The greatest age was 55, the least 2 months. Both are remarkable, the one being as old if not older than any case on record, the other representing almost the minimum age. Three of the patients were above 50; 8 between 40 and 50; 14 between 30 and 40; 35 between 20 and 30; 13 between 10 and 20; 6 between 5 and 10; 6 between 1 and 5; under 1 year of age, 5. Of the above 90 cases, 20 died, 70 recovered. Two deaths occurred in patients between 40 and 50 years of age; 4 between 30 and 40; 7 between 20 and 30; 4 between 10 and 20; 3 under 1 year. Two of the deaths occurred on the day of admission; deducting which, the relative proportion of deaths to recoveries is as 1 to 5. Two of the severest cases were complicated with delirium tremens, one of which died. One case was complicated with syphilis; the patient recovered, but having at the time of admission a large sloughing phagadenic ulcer on the penis; nearly the whole of that organ was destroyed, there remaining about one and a half inches of the corpora cavernosa beyond the pubis, and about two inches of the corpus spongiosum and urethra.

It will be observed that 17 of the patients were under 10 years of age; few were over 6. They were all from the Alms House nursery. The eruption in these cases was mixed, being in part variolous, and in part varicellous. In a majority of the cases the varicellous eruption predominated; in some the two eruptions were in nearly equal proportion, and in a few the variolous eruption was confluent—but here and there a genuine vesicle was apparent. Several of the worst cases of confluent variola occurred in Germans, bearing, as is their custom, the marks of vaccination in three or four places. They had never been *re*-vaccinated.

A cooling antiphlogistic treatment was uniformly pursued;—the covering of the patient was light—the doors and windows were thrown open whenever the weather would permit. Large and repeated saline cathartics were administered. Cream of tartar water, and flaxseed tea, were the usual drinks, and ice was always allowed when desired. A gargle of strong sage tea, either alone, or holding alum in solution, was most commonly administered to relieve the inflammation of the fauces—to accomplish which the want of leeches was often severely felt. The lancet was not employed; the post-mortem examinations clearly showed, that its use might have been beneficial. The absolute diet, the saline cathartics, and the free use of cream of tartar water, generally rendered venesection unnecessary. In the stage of desiccation, a mild tonic course was resorted to. In some cases infusum serpentaria, or quinine, was prescribed; in others, merely nourishing diet, with a moderate allowance of porter.

Nine post-mortem examinations were made. The appearances observed were so similar in all the cases, that it would be an useless repetition to give them in detail. Bronchitis and pneumonitis appeared to be the cause of death in every case but one, in which the patient died from effusion in the brain.

Alonzo Perigo, Vermont, æt. 21, admitted April 1st, 1840. Eruption preceded by three days fever appeared on the second; confluent, attended with unusual delirium; death on the ninth day of eruption. Autopsy:—Slight cadaveric rigidity; cuticle easily detached from the face and trunk; pustules flattened. Head:—Dura mater healthy; arachnoid and pia mater slightly congested, with a small amount of serum between them. Thorax:—Inferior lobes of both lungs in first stage of pneumonia, and very much congested. The superior lobes were also slightly inflamed. The mucous membrane of the larger bronchii was very much inflamed, as was also that of the trachea and larynx, which last was ulcerated in one or two points. No trace of pustules visible in any portion of the air passages. The pharynx and œsophagus were inflamed, and studded with pustules. The mucous membrane of the stomach was also much inflamed, and ulcerated patches were observed along its greater curvature. Pustules were observed here, and in the duodenum. The jejunum was free from both pustules and inflammation, as was also the ileum, excepting its inferior portion, where it was slightly ulcerated and a few pustules observed. The appendix vermiformis was filled with this pustular eruption. The cæcum and colon were normal, but on reaching the rectum pustules were again observed at intervals. Liver enlarged and softened; rest of viscera healthy.

Remarks.—In this case the pustules on the surface were very much flattened, and those observed in the alimentary canal were very small, and in some instances indistinct without the aid of glasses. It is rare to have an opportunity of examining a small-pox patient at a time when the pustules have arrived at maturity; the patient either dying after the eruption has become flattened, or else the same cause which produced death, prevents the full development of the pustule. The existence of internal pustules has, perhaps, been frequently overlooked on this account, as they are often so much flattened as easily to escape observation. The following case showed an unusual development of pustules in the internal parts of the body.

Robert Casson, æt. 28, admitted January 30th, 1840, at 5 P. M. Death on the 31st, from effusion in brain. No history could be obtained. The case was complicated with delirium tremens. Eruption quite numerous, but distinct; apparently about the seventh day.

Head:—All the membranes inflamed, particularly at the base of the brain. About four ounces of serum found in the ventricles.

Thorax:—Intense pneumonia, in the second stage, of inferior lobe of right lung. Slight bronchitis. A few pustules, very distinct, observed in the large bronchii, trachea, and larynx.

The œsophagus and stomach were inflamed; the mucous membrane lining them literally covered with pustules. The small intestines were normal. On opening the cæcum they again appeared, and continued throughout the colon and rectum. The appendix vermiformis was filled with them.

I am aware that the existence of variolous pustules in in the internal parts, is denied by perhaps a majority of pathologists, but the opinion here expressed has also able and accomplished advocates. Their existence has been denied by Haller, John Hunter, Gregory, and others. Rayer, and Dr. John Bell, of Philadelphia, call them enlarged mucous follicles, which the latter says, 'might seem to the observer to be of the same nature as the eruption on the skin.' Cruveilhier regards them as pustules. Dr. Mackintosh also describes pustules in the alimentary canal. I would refer those interested, to the last edition of Dr. Marshall Hall's 'Practice of Medicine and Diagnosis,' which has appeared since these examinations were made. The pathology of variola as there recorded, corresponds with these observations, particularly in relation to the appendix vermiformis cæci. Whether these are pustules, or only enlarged mucous follicles, certain it is they are *variolus*—at all events we have never witnessed them as the effect of any other disease.

I am, sir, very respectfully,
Your obedient servant,
Richard H. Coolidge, M. D.,
Assistant Surgeon U. S. A.

To Middleton Goldsmith, M. D.,
President of the Society of the Alumni of the C. P. and S., University of the State of New York.

On the Mechanism of Vomiting.

The theory of vomiting is a subject which has perplexed physiologists for nearly two centuries. Formerly, it was universally maintained that it is 'caused by the sudden and convulsive inverted contraction of the stomach.' In 1681, Professor Francis Bayle, of Toulouse, suggested that the stomach is nearly passive in the act,—the diaphragm and abdominal muscles being almost exclusively concerned. Chirac confirmed this view by experiments; after which, the theory of Bayle was embraced by many of the most eminent physiologists,—by Senac, Van Swieten, Schulze, Schwartz, and John Hunter. Many distinguished physiologists, however, adhered to the old theory. Littre, Lieutaud, Haller, Portal, and Haighton, have maintained that the stomach, alone, is competent to the operation. The Academy of Sciences at Paris, appointed Duverney to examine into the subject experimentally; who, at least, partially confirmed the views of Bayle and Chirac.

In 1813, M. Magendie presented to the French institute the result of a series of experiments; which seemed to establish beyond all doubt, that the stomach is nearly passive in the act of vomiting. (Vide Dunglison's Human Physiology, 1st ed., vol. 1, p. 520, et seq.) Notwithstanding the apparent clearness of Magendie's deductions, M. Maingault soon laid before the Society of the Faculté de Médecine of Paris, a memoir, in which his conclusions were con troverted by a series of experiments. When this memoir was presented to the Society of the Faculté de Médecine, MM. Legallois and Beclard were appointed reporters. The experiments were repeated, and variously modified, from which they deduced conclusions entirely confirmatory of the accuracy of those of Magendie. They could detect no motion in the stomach, excepting *circular contractions near the pylorus*, which they considered to be independent of vomiting. (Vide Dr. Baly's translation of Müller's Physiology, 2d ed., vol. 1, p. 554.) Thus, the fact that the diaphragm and abdominal muscles are chiefly concerned in the forcible ejection of the contents of the stomach, may be considered as established beyond all question. But, it seems to us, that the subordinate, or accessory part, which the stomach plays in the process, has never been sufficiently investigated.

It is well known that in some individuals, as well as several animals, there exists an impossibility of vomiting. Now the question is, how is this inability to vomit produced? Dr. Good remarks that vomiting may be rendered impossible from cancerous ulceration and enlargement of the *pylorus*. (Doane's Ed. of Good's Study of Med., N. Y., 1836. Vol. 2, p. 85.) Dr. Osborne, in an article in the Edinburgh Medical and Surgical Journal, for Oct. 1832. p. 255, et seq., ascribes the impossibility of vomiting in some persons, to one of two causes: 1st. *Contraction of the œsophageal orifice*; 2d. *Permanent opening of the pyloric orifice.* He adduces two cases in which the first cause seems to have operated; although the proof only amounts to a strong probability, as there was no opportunity of demonstrating the existence of a contracted state of the cardiac orifice. The instance which Dr. Osborne adduces in support of the operation of the second cause is much more satisfactory. This was the case of a woman aged 45, who was affected with cancer of the *pylorus*. She had *never vomited* since her admission into the Hospital. On examination, 'the *pylorus* was found presenting a firmly attached and permanently open orifice, *of an inch and a half in diameter.*' Dr. Osborne maintains that this patulous condition of the *pyloric orifice* must necessarily prevent vomiting, since the contents of the stomach would be *forced* down the *pylorus*, by the contraction of the diaphragm and abdominal muscles. He also thinks that the great difficulty of horses vomiting, is attributable to the same cause; 'for,' he affirms, 'the diameter of the *pylorus* is so large as to admit the passage of a hand of ordinary size, and is at least *twice* the diameter of the *æsophagus*.' He also maintains that the longitudinal muscular fibres at the œsophageal extremity of the stomach of the horse—to which Cuvier ascribed the impossibility of the animal's vomiting—are quite inadequate for the purpose assigned. In Magendie's well-known experiment of substituting a bladder for the stomach, Dr. Osborne remarks, that vomiting was inevitable when the abdominal muscles contracted in conjunction with the diaphragm, because the contents of the bladder had but one exit, namely—through the *œsophagus*.

We entirely accord with the foregoing observations of Dr. Osborne, with regard to the agency of the pylorus in the mechanism of vomiting,—a fact which has been overlooked in all the experiments on this subject.

Dr. P. M. Roget observes that the stomach of a horse has the œsophageal portion lined with a cuticular membrane, which terminates in a loose expansion, supposed to have the office of a valve, and to prevent the possibility of the animal's vomiting. (Roget's Outlines of Physiology, 1st Am. Ed., Phil. 1839. p. 394, paragraph 983.) Thus it appears, that the only obstruction to the vomiting of the horse, is a duplicature of the *epithelium* lining the cardiac extremity of the stomach. We think such a membrane wholly inadequate to arrest the function of vomiting, unless some other causes co-operated. If so, why do we find the difficulty of vomiting to be as great in the Ruminantia, where, of course, the œsophageal passage is clear, as in the Solipeda, where the valvular arrangement exists? M. Flourens found that the ruminantia, could with great difficulty eject food from the fourth stomach; which, in fact, is the only true stomach, since the other three are lined with epithelium. (Dr. Baly's translation of Müller's Physiology. 2d ed. vol. 1. p. 553.) Schultz imagines that where the stomach has a dilated fundus, as in the rabbit and horse, the food performs a circular movement along the two curvatures, under the action of the efforts at vomiting—while in the carnivora, it moves from the pyloric to the cardiac extremity. (Müller. Op. cit. vol. 1. p. 551.) It is somewhat remarkable, that animals belonging to the classes Rodentia and Solipeda, in which this peculiar mechanism of the stomach exists, should possess such an extraordinary development of the *cæcum*; in the horse it measures two and a half feet in length, and in the beaver two feet. (Müller. Op. cit. vol. 1. p. 536.)

With regard to the action of the *pylorus* in vomiting, it is proper to remark, that it is, at least, *partly* closed during the earlier stages of ordinary digestion, and that it seems to be *completely* closed when *nausea* exists. This last is proved by the fact that when fluids are taken into the stomach, the *whole quantity* is ejected—none passing out of the *pylorus*. In the horse, on the contrary, fluids find a free exit from the stomach into the large intestines. Thus, Mr. Coleman found that in six minutes, water reached the *cæcum* of a horse. (Müller. Op. cit. vol. 1. p. 552.)

The horse is able to vomit, but it requires a degree of exertion that is almost fatal. The probability is that the duodenum is compressed by the abdominal muscles acting upon the liver, and being caught between it and the spinal column. We know that in vomiting the duodenum is compressed more or less, for we find bile in the matter ejected from the stomach, and a considerable degree of force is requisite to urge the bile in a course contrary to that of its usual direction. Indeed it would be impossible to produce this alteration, since the whole organism of the intestines seems to have in view the propulsion of its contents towards the anal extremity, were it not for the nature of the posterior surface of the liver. It is bevelled off, in general terms, from the right to the left, and in consequence of that arrangement, in compressing a tube between that surface and one that is plane, the point at which the force would be applied first and greatest, is that which is furthest from the stomach, and the pressure going progressively from that point, carries the contents of the tube before it. This seems to us the only rational way of accounting for the presence of bile in the matters thrown from the stomach, especially as bile does not make its appearance at first. It is only to be seen after several efforts have been made, differing in the rapidity of its appearance as do the efforts in their violence. Thus, in the ordinary and easier vomiting of chronic gastritis, bile is hardly ever seen, if at all, in the first ejection; while in the violent efforts which attend more acute disease, it is *cæteris paribus* more constant and rapid in its appearance.

With the hope of determining the part which the pylorus took in vomiting, we instituted a series of experiments.

Experiment 1st. The subject chosen was a large and healthy male cat. The animal was fastened so as to confine its feet, and yet allow of sufficient freedom for all the motions necessary in vomiting. The abdomen was opened by a section in the linea alba. The duodenum was seized and opened, and a tube a little less than the calibre of the intestine was introduced, and passed up into the pyloric orifice of the stomach, just far enough to keep the pylorus patulous. It was secured in its place, the intestines were returned into the abdomen, and the walls were again united by suture. A pipe was then passed down the œsophagus, and about three ounces of a strong solution of the tartrate of antimony were thrown into the stomach. In eighteen minutes and a few seconds, the cat made several violent but ineffectual attempts to vomit. After we had satisfied ourselves that the animal was unable to vomit, we again opened the abdomen; we then found that the stomach contained less than an ounce of fluid, the remainder having passed into the small intestines. We then placed a ligature around the duodenum at the right extremity of the tube, returned the intestines, sewed up the abdomen, and filled the stomach with two and a half ounces of the injection. In five minutes and twelve seconds, and on the first effort to vomit, the fluid was thrown some four or five feet in jets, and all of it, as we supposed, was ejected.

We then opened the abdomen for the third time, and found a small quantity of fluid in the stomach, about enough to fill the tube in the duodenum. The ligature on the duodenum was removed, the intestines returned as before, and a fresh portion of the antimony was introduced. Efforts to vomit soon succeeded. The abdominal muscles were thrown into convulsive action, but emesis was not effected. Defecation was produced, but whether it was from the pressure of the abdominal muscles, or from the action of the antimony that had passed down the intestinal track, we were unable to determine. This experiment lasted a little over two hours. The cat remained to the last strong and active.

Experiment 2d. The subject of this was a full-grown female cat. We fastened it to the table as in the preceding experiment, and before opening its abdomen we injected a solution of the sulphate of zinc. The quantity we could not judge of, since the animal was very restless, and most of it was thrown from the mouth. We waited until the cat showed nausea, and then made the section as in the preceding instance. We found the stomach distended with air and scarcely any of the solution in it—not more than a half ounce. It should have been stated before that in injecting the solution of the sulphate of zinc, we continued to throw it in until we saw the abdomen somewhat distended. When the stomach was fairly protruded, we examined it closely, and found the pyloric orifice rigid and contracted. The stomach was then taken in the hand, and an attempt was made to force its contents through the pyloric orifice. But as far as we could see, and we watched closely, not a particle of air, or of fluid, escaped by that extremity. When the pressure was continued with moderate force, the animal vomited freely and easily.

We next opened the duodenum and attempted to pass the tube through it into the pyloric orifice. But it was found that too much force would have to be employed to overcome the stricture. The tube was partially withdrawn and water was thrown in. This at first would not pass; but after a little while, the muscular fibres at the pyloric orifice being relaxed under the influence of the cold, the water passed readily in. The tube was then introduced without difficulty. It was secured as in the former instance. Zinc was given, and strong but ineffectual efforts at vomiting were produced. We tried by every means in our power to excite vomiting, but though the efforts were strong and well marked, none could be produced. The abdomen was again opened, the stomach filled with fluid, and a ligature was passed about the duodenum, and the walls of the abdomen closed, as in the preceding experiments. The animal by this time (for nearly two hours had elapsed since the section was first made) was nearly exhausted. However, a few feeble efforts were made, and even by these the greater part of the contents of the stomach were ejected.

Experiment 3d. This was a young female cat, healthy and strong. This animal was fastened in the same way, and the section was performed without introducing any emetic substance. The pylorus was found open, and the tube was introduced without difficulty. The result of the experiment in this case was confirmatory of those in the other two instances. In the latter stages of the operation, the subject was more exhausted than in the preceding. It presented the same phenomena, but not in so marked a degree.

If the foregoing statements be true, and our experiments were correctly performed, we think that the following propositions may be established. That there are two agents in the mechanism of vomiting. First, the pylorus; and second, the diaphragm and abdominal muscles. We speak now of vomiting in man and the carnivora. In regard to the second there is no kind of doubt; the fact being established beyond all question, and being universally admitted. The evidence of the first is derived from *comparative anatomy, pathology,* and *direct experiment.* In the first place, then, it is an established fact, that the solipeda, some of the ruminantia, and some of the rodentia cannot ordinarily vomit—that in all those animals which are unable to vomit there is a great disproportion between the pyloric and cardiac orifices of the stomach, and that in this want of proportion the pylorus is the larger. It is improbable that in these cases the pylorus ever closes; and this opinion rests upon the fact that water and other fluids pass more rapidly in them from the true to the cæcal stomach, a fact which is to be attributed to one of two things—greater activity of intestinal action, of which there is no proof, or to the existence of less obstruction to its passage, which is known to be the case. In the second place, it is known that if these animals ever vomit, the effort, from its violence, is almost fatal; and when it does occur, that it is probable that the duodenum is compressed by being caught between the liver and the posterior wall of the abdomen; which, when it does happen, would be, as far as vomiting is concerned, tantamount to closure of the pylorus.

In pathology the evidence is derived from the cases in which there was inability to vomit In these the pylorus is found patulous—its closure being prevented by ulceration on the internal surface—and being fixed in its open condition by adhesions to surrounding organs. Another proof may be drawn from the greater frequency of vomiting in irritable conditions of the pylorus, as observed during life, and a collateral evidence may be drawn from the fact, that in stricture of the pylorus, vomiting is both easy and frequent. The evidence drawn from direct experiments, would of itself be conclusive, if they were sufficiently extended, and were performed with the necessary degree of precision. Without assuming for them any such merit, we think we can fairly claim a strong probability from this source, and if succeeding experiments coincide with those already stated, the proposition will be sustained beyond the possibility of a question. We purpose going into some additional investigations in relation to this subject. We mean to extend the number of vivi-sections, and to see the effect which will follow ligature of the pylorus in some of the solipeda and ruminantia. We regard the whole subject as one which is pregnant with interest, and well worthy of attention.

Middleton Goldsmith, M. D.
John Le Conte, M. D.

Case of Aneurism of [illegible] Ice. [illegible]moral Artery cured [illegible] of Irel[illegible]

William Barret, æt. 15, native [illegible]nd, was attacked some time last fall, with what was called at the time rheumatism in the left leg. He complained of violent shooting pain in the calf of that leg, and along the internal malleolus and inner side of the foot. This pain, though always present, was not constant in situ; it varied from time to time—sometimes referred to the knee—sometimes to the whole of the leg—and sometimes to the region of the adductor muscles of the thigh. The physician in attendance used counter-irritants over the seat of the pain, and such other local remedies as the necessities of the case seemed to demand. But they were not followed by any mitigation of the pain.

I was called to see him in the early part of December, and my attention was directed to the seat of the pain and to a swelling in the groin. There was no tenderness about the leg or foot, nor had there ever been any in that region. There were no other sigus of rheumatic inflammation than the pain, which by the time I saw him was mitigated considerably in intensity.

His mother said that soon after she had observed the tumor in his groin, the pain began to subside. I examined and found that it was evidently aneurismal. Firm and continued pressure upon it aggravated the pain in some degree. The tumor pulsated and presented the aneurismal thrill. It disappeared on pressure upon itself, and upon the external iliac artery.

The boy was chlorotic; his mother and his sister were both chlorotic, and had been so for a long time; for three years he had been troubled with bleeding from the nose. His face was pale and bloated—of a yellowish cast. His pulse was frequent, intermittiug, and sometimes a few beats were strong. His tongue was pale and swollen. His appetite poor—digestion feeble—bowels open, and tolerably regular.

On examining the abdomen I saw the pulsations of the heart manifesting themselves with considerable force at the epigastrium. The heart could be heard over nearly the whole thorax. I called in Dr. A. Goldsmith and Dr. Willard Parker, who pronounced the disease of the heart hypertrophy, and probably dilation of the left ventricle. A subsequent examination of the patient, made by Dr. Clark, confirmed this opinion. The patient was exhibited at the Crosby-street Clinique, and likewise to Dr. Mott, who I believe concurred in the opinion expressed by the other gentlemen. In this state of things an operation was thought unadvisable, and our whole attention was directed to remedying the chlorotic disposition and improving the general health.

The patient was put upon the use of the syrup of iodide of iron. The nose bleedings became less frequent, the countenance clearer, and the palpitations were diminished in frequency and in force. This treatment was entered upon in the hope of producing such a state of health as would admit of an operation.

The tumor at this time was about the size of a large hen's egg, situated just below Pourpart's ligament.

About the first of February, seeing but little chance of such an amendment as would admit of an operation, I determined, though with no hope of success, to try the efficacy of ice applied to the tumor. I was led to it from having seen a case reported, in which a cure had been effected in that way. I directed the mother to apply a lump of ice, folded in a towel, upon the tumor from time to time, as frequently as she conveniently could. At the end of a a month or thereabouts, the patient was again presented to the class in the clinique of this institutiou, and the tumor was found to have decreased in size—so as to be about the size of a walnut. No perceptible change could be discovered in the [illegible] of the heart, but there was evidently some eff[illegible] the abdomen.

I did not see th[illegible] until called to it about six weeks afterwa[illegible]ount of an attack of difficult breathing. I then found the tumor about the same size. The dyspnœa was relieved, and I did not see him again until three days before his death. This occurred in April. I then found him with difficult breathing and œdema of the extremities; next day he was œdematous over the whole body. The scrotum was as large as the head of a new-born child. The breathing was hurried—countenance anxious—pulse labored. I went immediately for Dr. Clark, of this city, and during the examination of the patient, I directed his attention to the aneurism. *It had no pulsation in it.* Of this we were assured by repeated examination. In confirmation of this I refer to Dr. Clark.

On the third day after the attack the patient died, and owing, as I believe, to the interference of persons about the mother, I was unable by any means to procnre an examination. It is needless to state how much it is to be regretted, because a post-mortem examination was necessary to establish beyond the possibility of a doubt, that the cure was effected. The tumor was hard, and entirely without pulsation.

There are several points of interest in this case:—

In the first place, it is not usual to have aneurism in so young a subject. There is one case, reported in the London Lancet, of Mr. Liston's, as occurring in a boy of fifteen years.

In the second, we notice the pain, which simulated that of rheumatism or neuralgia, seeming to mark the development of the aneurism, and that when the tumor measurably disentangled itself from the nerve, that the pain decreased.

3dly. The chlorotic condition of the blood, and the modification of the stethoscopic sounds of the heart, which this condition would produce, rendered the diagnosis of the cardiac derangement somewhat obscure.

4thly. There seemed to have been a tendency to aneurism in the whole arterial system, and the question may arise, is there any connection between the state of the blood and the arteries?

5thly. If there is any connection, why should the chlorotic diathesis be common to the whole family, and the aneurismal pecular to one?

6thly. The result of the treatment, if sufficiently established, in this case, added to that of the other, to which I have referred, may suggest the propriety of trying the remedy again. At all events, its application can do no harm.

I am aware of the fact that no evidence is complete, or perfectly satisfactory, in a case of this kind, unless it is derived from post-mortem dissection; but as there is proof enough to render it highly probable, I have thought the case of importance enough to warrant its publication.

MIDDLETON GOLDSMITH, M. D.

CASE OF ABSCESS FROM PNEUMONIA OF THE LEFT LUNG,

In a tuberculous patient, terminating favorably, by forming a fistulous opening between the third and fourth ribs, and an abscess in the substance of the lung.

BY LEWIS A. SAYRE, M. D.,

Prosector of Surgery in the College of Physicians and Surgeons in the University of New York.

William Whiteside, æt. 10, was attacked December 7th, 1840, after exposure to a severe storm, with acute pneumonia of the left lung. I found him with violent fever, rapid, hard pulse, great heat of skin, white coat upon the tongue, constant cough, without expectoration; but accompanied with great pain, particularly upon taking a deep inspiration.

He was of a debilitated habit, of consumptive family, and had been troubled for a long time previous with a cough and free expectoration, mucous rale in the superior lobe of the left lung, with dulness on percussion; in fact, all the symptoms of tubercles in that region.

Owing to his prostrated condition, I dared not bleed him; but prescribed a warm bath, a cathartic of sub-murias and rhei, with tart: ant: and ipecacuhana in nauseating doses. Next morning found him much easier, skin moist, bowels had been moved freely. Inspires much easier, and has some expectoration with the cough. Tart: ant: and ipecac: continued.

The case presented nothing of interest, more than an ordinary case of pneumonia, and he convalesced rapidly, with the exception of his cough and expectoration, which continued as before, with some slight aggravation.

On the 2d of January, 1841, I was called to see him again in great haste. He had been exposed the day previous to a severe storm, and I found him laboring under the same symptoms as in the first attack, but in a much more aggravated form.

I bled him, and prescribed the ordinary treatment in pneumonia. The disease followed the usual course, and nothing peculiar occurred until convalescence had commenced, when he seemed languid, indisposed to take exercise, and complained of severe pain in the left side. I cupped and blistered over the region of the tender part, which gave temporary relief only, and in a few days his symptoms were as violent as ever. The blister was repeated, and kept running for some time with some abatement of the pain, but the cough and expectoration continued as free as at first, for which he took pulv: Doveri and ipecacuhan. The superior lobe of the left lung continued dull upon percussion, and tender; respiration indistinct, with mucous or crepitant rale, tongue coated, rapid pulse, and no appetite. I administered such remedies from time to time as I thought the symptoms indicated; but it seemed to be a confirmed case of *phthisis*, and beyond the reach of remedies. The hectic fever and night sweats continued, and the œdematous condition of the feet was followed in a short time by general anasarca of the whole system, with rapid strong pulse, and great pain in the region of the heart, which beat very strong, and had some of the peculiarities of hypertrophy of that organ.

Digitalis and squills were prescribed, which relieved these symptoms for a time. The effusion several times returned, and was generally relieved by the same kind of treatment.

He remained in nearly the same condition for about two months, gradually sinking, with no abatement of the cough, but increase of expectoration and constant pain in the left side. About this time the left side began to dilate sensibly, and gave a dull sound upon percussion, over nearly its whole extent; respiration almost inaudible and the heart pressed to the right of the sternum, with its apex pulsating near the ensiform cartilage, showing that effusion had taken place into the cavity of the pleura. The expectoration was checked for a few days, as the effusion went on in the pleura; but in a short time, when the side became distended, and the cavity appeared full, it became as free as before; leading to the belief that ulceration had taken place between an abscess in the lung and the cavity of the pleura.

He was so much prostrated that tapping was not even thought of, and very little hope was entertained of his recovery.

He remained in this condition about six weeks, his preceding symptoms accompanied with more or less severity. About this time, the pain in the side increased, and a pulsating tumor began to make its appearance between the cartilages of the third and fourth ribs, near the sternum; similating very accurately an aneurism—so much so, that upon consultation, we dared not open it, and it was concluded to let him alone, merely palliating his symptoms as well as possible.

The tumor continued gradually to soften, and in about two months from its first appearance, it ulcerated and discharged about a quart of very offensive pus.

At this time the boy was very much emaciated, unable to sit up, pulse about 120,—tongue coated and no appetite,—mucous diarrhœa,—feet and legs œdematous,—hectic fever,—night sweats, and expectoration very free. So soon as the nature of the tumor was known, by its rupture, our worst fears were removed, and some hope began to be entertained, that if we could support the system during this free discharge, he might possibly recover.

The opening was dilated, and the discharge continued very free; the expectoration ceased entirely; the bowels became regular; the anasarca disappeared, and in a word, all his symptoms were very much improved.

He was put upon porter, beef-steak, and in fact every thing that would have a tendency to support the system.

He continued improving for about two weeks, when the opening in the chest becoming closed, the *expectoration returned as bad as at first, and of precisely the same nature, as what was discharged by the external opening*, and in a few days as the fever returned, with loss of appetite, I was called again to see him. Upon discovering the difficulty, I opened the wound, laid him upon his shoulders, and elevated his hips, and discharged nearly a quart of pure pus. *The expectoration ceased again entirely*—and a discharge of the same nature, continued through the external opening—showing that ulceration had taken place between the pleura pulmonalis, and an abscess in the lung, communicating with the bronchia—and when the ulceration had taken place in the pleura pulmonalis, the matter in the abscess was discharged into the cavity of the pleura, which accounted for the check in the expectoration during the filling of that cavity, and its return when the side became fully distended. And that the ulceration continued on through the pleura costalis, intercostal muscles, and integuments, at the *superior, instead* of the *inferior* and *most dependent* portion, as we generally find it. And, finally, the heart, being pressed out of its normal situation, by the presence of the fluid, brought the arch of the aorta, directly under the tumor, which accounted for its strong pulsations, and caused the difficulty in its diagnosis.

The discharge continued very free for some two or three months, but began gradually to subside, and in a little more than seven months from the first discharge, it had healed entirely—leaving him much deformed, from the contraction of the left side, which measured several inches less than the right, and curved the body in that direction. Respiration could not be heard upon the left side, except at a small place between the scapula, but a sound like that produced by blowing in an empty box.

This blowing sound gradually gave away to the natural murmur, which increased until it can now be heard over nearly two thirds of the lung, and the boy has assumed nearly the erect posture again. The right side still measures four inches larger than the left, and the heart remains, in its abnormal position at the right of the sternum.

It is now nine months since the external wound healed, during which time he has continued to enjoy uninterrupted health, has had no return of the cough or expectoration, with which he had been troubled nearly two years, previous to the first attack mentioned in this paper, and is now in a perfect state of health—except complains slightly of shortness of breath from running up stairs; but thinks he has very much improved in this respect in the last six months.

Quere.—In an *abscess* of one lung, if we could accurately diagnose that the other was in a perfectly healthy condition, might we not puncture the thorax, and collapse the diseased lung, with some prospect of success in gaining an adhesion of its walls? Or, in *empyema* of a tuberculous patient from the rupture of an abscess into the pleura, would we not be justified in tapping as soon as discovered.

L. A. Sayre, M. D.

New York, October 18th, 1842.

The President exhibited to the Society a preparation, illustrative of a case in which there had been caries of the dorsal vertebræ, and the discharge had communicated with the right pleural cavity. This was likewise associated with tuberculous disease, and the matter was discharged by an opening between the fifth and sixth ribs. In this case, too, as long as the opening remained, the expectoration was trifling, but on its closure profuse expectoration took place, and when the opening was again made the expectoration ceased. After a second closure of the opening the patient died, apparently suffocated by the immense quantity of fluid with which the bronchi became filled. In the autopsical examination, it was discovered that the lung had almost entirely disappeared.

Dr. Vache had likewise reported to him (the President) a case, in which there was an immense collection of pus in the left thoracic cavity; and in that case the lungs were healthy, but so greatly diminished in volume, as to be only about an inch and an half in length. A full report of the case will be given in the next Transactions.

On Opium Smoking as a Remedial Agent.

BY DR. JAMES JOHNSON.

[An interesting paper on the opium smoking in China, has been published by G. H. Smith, Esq., surgeon, in Penang, and communicated to Dr. Johnson, who makes the following remarks on the subject :—]

First. I think it will be admitted that the Chinese mode of taking opium by smoking or inhalation, induces the peculiar sedative effects of that drug more powerfully and more speedily than when taken into the stomach.

Second. There can, I believe, be little doubt, that these effects are produced chiefly, if not entirely, through the medium of the nervous system, and not by digestion, absorption, and the circulation.

Third. It does not appear that the casual or temporary smoking of opium is more dangerous or injurious to the constitution than that of swallowing the drug, whether in substance or solution. On the contrary, I believe it is less so, and not so likely to impair the functions of the stomach, liver, and bowels, as when directly applied to the digestive apparatus.

Fourth. The habitual abuse of a drug, by which, in fact, it is converted into a poison, is no argument or reason against its occasional exhibition as a remedial agent.

Fifth. If the above observations be admitted as rational, I see no reason why we should not employ the Chinese mode of inhaling the fumes of opium, in certain dangerous and painful maladies where the common mode is found to be inefficient, and attended with great derangement of the digestive organs. It is clear that we can very seldom induce that profound sleep and insensibility to all mental misery and corporeal pain, by opium taken into the stomach, which we find to be produced by the inhalation of its fumes acting directly on the brain, through the medium of the nerves. Might not the Chinese mode, then, be adopted in tetanus, hydrophobia, tic doloureux (especially of the facial nerves,) violent spasms, and painful diseases that defy the power of opium taken in the common way ?

The various preparations of opium might be easily smoked by means of a common pipe, and the powerful effects induced in a very short space of time, without the possibility of their being rejected by the stomach, or prevented from acting energetically on the sensorium, and throughout the whole nervous system.—*Med. Chir. Rev.*

Gelee pour le Goitre.

BY MR. THOMAS BEESLEY, BANBURY.

[An elegant preparation of iodine with the above name is sold at Lausanne in Switzerland, which is found of great use in the same cases for which we use it in this country. It certainly is an elegant way of compounding the iodide of potassium, and is not liable to the reduction of the iodide, and consequent discoloration which sooner or later renders the ointment of iodide of potassium objectionable. The proportions of course can be varied, and a little essence of rose, or oil of lavender added if required.]

Dissolve by a gentle heat, ʒvj. or ʒvij. of white soap in ʒij. of proof spirit ; add to it while yet warm, ʒiv. of iodide of potassium, dissolved in the same quantity of spirit, and let it cool slowly in wide-mouthed vials, well corked. —*Pharm. Trans.*

Conium Maculatum in Coxalgia.

TO THE EDITOR OF THE LANCET.

Dear Sir :—

I think that the attention of physicians has not sufficiently been directed to the efficacy of conium maculatum in that distressing affection of the hip-joint—coxalgia. My attentiou was primarily directed to this article by the late Dr. Marinus Willett, who assured me that he had employed it in the above-mentioned disease with astonishing success, when every other medicinal agent had proved of no service. Believing the suggestions of this able practitioner worthy of consideration, I have subsequently administered the conium maculatum in coxalgia, and in no instance has it failed to produce unequivocal benefit. Having recently a case which had defied a variety of treatment, I exhibited the conium maculatum, and although my apprehensions of success were not sanguine, from the protracted state of the disease, yet the remedy incontrovertibly produced a salutary effect, and a speedy convalescence subsequently ensued. I therefore deem it proper to suggest the more frequent use of this remedy in this very formidable disease. The most convenient form of administering conium maculatum is thrt of the powdered leaves, in the dose of at least three grains a day, which may be gradually increased.

Yours, &c.

Wm. Parkinson Overton, M. D.,
178 Houston street.

New York, Oct. 10th, 1842.

To Correspondents.

The request of our friend at Galena, Ill., has been attended to. We are grateful to him for his good wishes.

Subscribers who may at any time miss receiving the *Lancet*, are requested to communicate with us through the Post Masters, in their respective neighborhoods, and not subject us to the expense otherwise incurred. The *Lancet* is mailed with great regularity, and if any numbers occasionally fail in reaching their destination, the blame must fall on some other quarter than this office. We think, however, it is quite enough if we supply the missing numbers, without paying heavy postage on the letters informing us of the deficiency. Henceforth, therefore, all such letters which are not post-paid, or transmitted free through the Post Master, will not be attended to.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, OCTOBER 29, 1842. No. 18

[FOR THE NEW YORK LANCET.]

MUSCLES OF THE EYEBALL.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. II.

134. Mr. John Walker has written a very sensible work on the philosophy of the eye. I wish he could have followed me in my investigation of the muscular power of the eyeball; he would then be at no loss to understand why one of the external recti is passive while the other is active. He observes:—'The efforts of the will cannot enable us to perform any action with the muscles which is not performed by them involuntarily. To instance, take the external straight muscle, which is as much under the influence of the will, probably, as any other muscle, and Sir Charles Bell says its nerve is voluntary; and yet it will be impossible to exert that muscle in one eye whilst the same muscle of the opposite eye is in action. Perhaps this might be done by many and renewed efforts, as in the case of the iris; and we also know that some individuals have acquired a voluntary control over the action of the heart, but these are extraordinary cases. Nor do I perceive that the fourth nerve is less under the influence of the will than the others. I consider it to be quite as easy to direct the movements of the superior oblique as of the external straight muscle, but not more so; and with respect to the inferior oblique, it is supplied with a branch of the third pair, which is universally regarded as a voluntary nerve.'

135. The external straight muscle is undoubtedly *voluntary*, for it has the power to act when the *will* prompts, though it may not act if a power stronger than its own opposes it. A man has the power to move to the *right*, but if a stronger man than himself pulls himself to the *left*, he will relax and be compelled to follow that movement. He does not lose his ability to move to the right when his motions are free—and thus it is with the muscles of voluntary motion.

136. Mr. Walker observes:—'Perhaps the ability to move *both* the external muscles in contrary directions may be acquired by renewed efforts, as in the case of the iris.' But he should recollect that this motion is perfectly useless, nay, worse than useless, in those eyes which have single vision with two eyes; and useless, also, where only *one* eye at a time receives the impression of external objects. The images of external objects would be distorted by throwing them out of the range of the optic axis, whereas the motions of the pupil, or iris either dilated or contracted, would only make the objects more or less bright.

137. Beside, the rectus externus is only active in one direction, and *only one of them can be active at a time. Contraction is effort*, and implies action; whereas, relaxation is the absence of effort, and implies passiveness or inactivity. The relaxation of an organ is only the withdrawing of muscular stimulus. If the muscles of the right arm and shoulder are unreasonably stretched, the muscles of the other arm and shoulder, as is well known, assist in restoring the equilibrium. But if this were not the case, then the muscles of the right side would be unequal to support a very heavy weight, and become powerless.

138. There *have* been instances of a diseased action in one of the external recti so as to contract it to its utmost limits, making the eyeball turn outwards *from* the nose; but I do not recollect more than one case myself, and then the person told me that he never regarded the objects impressed upon that eye. As it concerned vision, that eye was useless, and nothing was conveyed to the cerebral organs, but an additional quantity of light. The man was not conscious even of *this* fact, however, but I questioned him while I covered and uncovered the distorted eye, and I found that the objects, to his mental vision, were brighter when the eye was uncovered. This is the case, too, in squinting with the internal muscle; but the experimentor must not only be very patient in pursuing the investigation, but he must not let the person under examination mislead him, which he is apt to do through ignorance.

139. As to what Mr. Walker says respecting the ability of the sphincter muscle of the iris to contract and expand by a voluntary act of the *will*, that I have proved is an error—*it cannot be done*

140. Although, as I have observed before, certain fishes and certain birds have no use for that portion of the superior oblique which is posterior to the pulley—which pulley in their case is always absent—yet there is sufficient power in the part which is left to balance the eye, and give it all the assistance that single vision requires; not only to balance the eye when the recti are in motion, but to keep it from receding or projecting from the socket. The recti, no doubt, can perform all that the eye requires, but the obliques certainly give facilities to the movements of the recti when the eye is to move on its *circular* axis—for instance, they enable the eye to follow the outline of any round body without that jerking motion which the recti would give to the eye if deprived of their aid. So we perceive that though the recti are competent to move the eye in every direction necessary, yet the obliques add a *nicety* to their motions.

141. The inferior oblique is quite as necessary to sustain the eye in equilibrium, when its antagonist has its origin at the foramen oculi, as when it is short; were not this the case, the eye would squint obliquely, either up or down, as one muscle or the other was contracted. We perceive, therefore, that the two obliques have separate and joint functions, and their joint functions prevents excess. The truth is, their action, when combined, that is, when both obliques are contracted and the recti at rest, their joint action hinders the eye from rotating on its optic or imaginary axis. This rotation they are each able to give it, if that rotation were necessary, which is not the case, for when the *outline* of a very small object, such as the smallest O of this letter press, is to be examined, we shall perceive that the eye need not turn on its optic axis. The eye in tracing the outline even of a dot, makes a *progressive* motion as it moves round the dot, plainly showing that the recti are concerned in the motions.

142. Knowing, therefore, all the motions of the recti and the obliques, it must be conceded that the motion which draws *both* eyes in a *contrary* direction, is effected by a power distinct from any that belongs to the functions possessed by the recti

and obliques. Either there must be a muscle and nerve which we have not yet discovered, or some new power must be delegated to those that we *do* know.

143. The mere action of light on the *voluntary* nerves cannot compel the eyeballs to move *towards* each other, for it is well known that light does *not* influence those nerves. Neither is it probable that a nerve, without the aid of a muscle could effect the contrary motion. In my opinion, the nerve which stimulates the superior oblique, giving it the power of contrary motion, must not only be attached to the superior oblique, but be distributed over the iris. Whether this nerve is the fourth, or whether the fifth is endowed with the property of being influenced by light, is yet to be proved. As to the third nerve, that is universally admitted to be a *motor* nerve, and of the voluntary class.

144. At any rate, there are no muscles concerned in these peculiar motions excepting those which produce the contrary motion in the eyeball and the contraction of the iris, and as I have several times observed, the *posterior* portion of the superior oblique is the only part which can by any possibility be engaged in them. The additional length given to this muscle which moves the eyeballs in contrary motions in those animals having single vision with two eyes, proves that to effect the contrary motion there must be a *long* pull, a *strong* pull, and a *pull altogether*. Just such a pull, in fact, as the long muscle bearing upon the pulley, would certainly effect.

145. *We perceive, therefore, that light—as luminousness—is essential to that movement which contracts the diameter of the pupil and moves the eyeballs in a contrary direction. Every other motion of the eye is as well performed in the dark, or when the eyes are shut, as in the light.*

146. It may be said that the reason the eyes cannot move in contrary directions in the dark or when they are shut, is for the want of an object. To this I answer that the same objection applies at all times to the *closed* eyes, or when in the *dark*, for they can move freely in any direction we choose but the *contrary* one, and surely in the dark no object is present. The eyes move quite as well in the dark as in the light, and when they are shut we can look at a mental object, merely by the assistance of the four recti; and we find that when one eye moves the other follows.

147. But why is this? why must one eye follow the other? Some philosophers consider it as a *defect;* but a little consideration will teach us that it is one of the most beautiful arrangements in the whole economy of vision. One eye is not compelled to drag the other in the same direction merely because the fibrils of each nerve have the same origin at the cerebral point. Do we not know that we can see an object single with *two* eyes, whether the object is in front or at a certain angle from the front. Now this 'dragging the eye,' as it is called, is merely to look at the object which stands obliquely, that we may see it singly with both eyes at that obliquity of angle.

148. If the eyes did not turn on their *vertical* axis, and we wanted to see the object which was at the right or left of us, we should have to move our head until it was in a direct line with the object. It is the same with the horizontal axis, if the *eyes* could not rotate on it, the *head* would have to rotate on a horizontal axis in order to see the object. So it turns out that the movement of *both* eyes obliquely in one direction, is solely for the purpose of seeing objects *singly* in an oblique position.

149. All this, therefore, is easily explained; but there is a mystery about the contrary motion of both eyes—both of them turning inwards towards the nose. The motion is performed in consequence of the action of light upon some nerve—an involuntary nerve—and unless light does come in immediate contact with a nerve, the eye cannot, by any effort of the *will*, bring the axes of both eyes together. Here and there, we meet with a person who can slightly draw both eyes together in a contrary direction when the eyes are closed, if a very strong light falls on the lid—but never in total darkness. I have endeavored to prove, in the adjoining memoir, that we cannot, mentally see objects—*imaginary* objects, as they are called, without the aid of the external muscles.

150. We could no way account for the action of light on the superior oblique, unless we supposed that the fourth nerve was connected with the iris; for how else could light act upon the superior oblique, as it most assuredly does. At present, as far as the different authors report, the superior oblique and the fourth pair of nerves are no more under the influence of light than the recti, for light cannot have access to them. They are deeply seated, and have the covering of the eyelids besides; so that if they are instrumental in producing the contrary motion of the eyes, as they undoubtedly are, the *involuntary* nerves, those which contract the pupil, must communicate with them.

151. It is fair to infer, therefore, that the sphincter muscle of the iris and the superior oblique, are influenced in their motions by light, and contract or dilate as light is present or absent. I ought not, however, to say that it is a mere inference, but that it is an incontrovertible truth; for neither the contraction of the pupil nor the contrary motion of the eyeballs can be produced without the stimulus of light. Thus it is that the pupil is always dilated during sleep and in twilight, and that the eyes cannot be made to turn towards the nose at the same time, in the dark.

152. There are some writers—and Sir Charles Bell is the most prominent—who assert that the pupil is contracted during sleep; but this is a mistake. To be sure the pupil will have the *appearance* of contracting, if the eyelids are suddenly or even gently raised; for light acts instantaneously. The most superficial investigation will convince us that the involuntary nerves—speaking now solely of the eye—relax during sleep, and that the contraction of the pupil ceases the moment the eyelids close.

153. To be assured of this, let us, with the face to the light, look at our own eye in a magnifying mirror. After examining the size of the pupil, so as to become acquainted with it, the eyes must be closed for a few moments, and on opening them we shall just be in time to see that the pupil had been dilated and was then contracting. The *amount* of contraction, to even an experienced observer, is not much; but this is owing to its suddenness. Thus:—if the eye is accurately examined, when the lids open we shall perceive, first a dilation, then a contraction, and then a return of the diameter which generally belongs to the pupil. I do not hesitate to say that in every case, this will be found the same, excepting when we are in extreme pain, and are slumbering in a state of half consciousness.

154. The more frequently this experiment is made, the more apparent it will be, that in sleep, or when the lids are closed for any period of time, the sphincter muscles of the iris are entirely relaxed. It is this relief from tension which causes sleep to be hailed as the greatest blessing by the physician; and that in certain diseases of the eye, a good night's sleep generally brings with it an alleviation of the inflammatory symptoms. In fact, all the muscles of the eye are relaxed in deep sleep, at which time there is a total absence of consciousness. I have elsewhere endeavored to prove that in *perfect* sleep we never dream; *in this case*, the voluntary muscles are not in requisition, and most assuredly the involuntary ones would not be required to remain in a state of tension, as light alone can affect them. This one fact, however, of the inability of the sphincter muscle of the iris to contract, unless light falls on it, is conclusive.

155. Sir Charles Bell observes that medical histories do not often lead to the improvement of strict science—this depends upon the reasoning powers of those who examine into these histories. Many readers suffer them to pass as memoranda of little value, or bring them to bear upon cases to which they not only have no relation, but to which they would be positively injurious. When their merits

are appreciated justly, we place them as strong links in the great chain of facts which is lengthening for ever.

156. The very case which Sir Charles Bell brings forward, apologetically, is of great importance to the present question of the motions of the eye, but unfortunately, it proves the reverse of what he intended—or rather, it is not a case in point for *his* argument, although it is for mine. He observes of a certain patient of his, that 'the inflammation of the upper lid had been so great as to diminish its mobility; and what appeared most extraordinary, the lower lid assumed the office of the upper one, and a very unusual degree of motion was remarked in it. It was depressed when he attempted to open his eye, and elevated and drawn towards the nose when he closed the eye. But the upper lid was not only stiff, but diminished in breadth, so that notwithstanding this remarkable elevation of the lower lid, their margins could not be brought together, and we could perceive the motion of the eyeball. In his attempt to close the eye, we constantly saw the pupil elevated and the white part exposed.'

157. To differ from such high authority, I know must appear presumptuous; but as my readers are aware that light is an offensive stimulus to a diseased or weary eye, they will at once attribute the upward motion of the man's eyeball to a different cause from the one advanced by Sir Charles Bell.

158. If we raise the upper lid with the finger, and keep it in that position so that it cannot move, and then endeavor to wink, or bring the lids together, the under one will force itself higher up than is natural, but in no case so high as to hide the pupil, and yet the pupil does not turn upwards. The pupil, in experiments of this kind, is frequently upturned; but it is for the purpose of exciting the glands so that the conjunctiva may be lubricated. We know that when there is a deficiency of moisture on this membrane, the pain arising from atmospheric action on the dry surface is intolerable; but by winking we excite the glands, and spread the fluid secretions over the membrane; but as this man could not wink, he tried to produce the same effect by rolling the eyeball upwards, perhaps from the stiffness of the upper lid it was the only movement the eye could make.

159. As it is for the purpose of lubricating the conjunctiva that the eyeball is elevated under circumstances similar to the one stated by Sir Charles Bell, the upturning of it has nothing to do with the question. When the eyelids are in healthy action, the eyeball need not necessarily move; indeed, carefully repeated experiment and observation have convinced me that the turning up of the eyeball is an unnatural act, and the effort is always perceptible. In the case above cited, the man with the diseased eye rolled his eye up when he endeavored to wink, because the muscles were in a very diseased state. As that was the fact, then this was not a case in point, and should not be taken in evidence.

160. When the eye is weary and intolerant of light, it seeks for shade or protection from the glare. The upper eyelid drops over the pupil, and what Sir Charles Bell forgot to note, *it drops below* it. I mean precisely what I say, that the upper lid is long enough to drop below the pupil, not with an effort, but naturally, and this is the case with every eye. In consequence of this, the pupil or cornea, on a careless examination, would have the appearance of having turned itself up above the margin of the eyelids, whereas it is in its usual position.

161. But it sometimes happens that the muscles of the eyelids are tense, and in consequence the margins of the latter cannot shut closely; it is in cases like this that Sir Charles Bell has seen the eye turn up and hide the pupil; but this is disease, and not to be accounted proof. Besides, patients of the class which he describes, may easily acquire the trick of turning up their eyes when they attempt to wink, or rather to bring the eyelids together. I have known persons who always rolled their eyes up when they yawned, but they could, when desired to do so, yawn quite as satisfactorily with the eyes in their natural state. During the progress of this inquiry, I have paid the minutest attention to acts of this kind, without giving any intimation that I was watching the motions of the persons before me. I knew that the very circumstance of being examined in this way, would produce an unnatural gesture.

162. Sir Charles Bell further observes, that 'the recti, being voluntary muscles, suffer debility before the oblique muscles are touched by the same condition, and the oblique muscles prevailing, roll the eye.' By this he imagines the obliques must be voluntary muscles also, and in consequence, that the fourth nerve is a voluntary nerve, for we know that it is this nerve which gives character to the muscle.

163. Now of what use is the oblique muscle in such a case as this, seeing that the upward motion of the eye is caused by the rectus superior; for by rolling the eye, he means the act of turning it up under the upper eyelid. The upward motion is undoubtedly performed by the rectus superior, and this we know is a voluntary muscle, and should certainly be at rest when the eyelids are closed in sleep. If he make more minute experiment, he will acknowledge that the obliques are not wanted either for the act of rolling the eye upwards or from right to left, as the rectus externus and internus perform these motions; and in fact, the recti can also rotate the eyeball on its circular axis, though not with such regularity as when assisted by the obliques. Let me repeat again, that the superior and inferior obliques, without the pulley, are only in requisition to balance the eye and keep it in its place, which motions the recti are not competent to perform. The rolling of the eye even around its circular axis, I do not mean its *optic* axis, can be effected by the recti when in the dark or with closed lids; but it requires the posterior portion of the obliques of both eyes, when the eyes are open to the light, *to assist the recti in producing a contrary motion in the eyeballs.* I hope that the various modes in which I have placed the question will not appear tedious; a repetition often makes them clearer.

164. Sir Charles Bell further observes—'If it be asked why does the eye roll upwards and inwards, we have to recollect that this is the natural condition of the eye, its position when the eyelids are shut and the light excluded, and the recti at rest, and the obliques balanced.'

165. Now this cannot be the *natural* condition of the eye, for I have abundantly proved that the rolling the eye *upwards* is a voluntary act, and as it implies *voluntary motion*, the eye cannot be at *rest*, and *rest* is the natural state of the eye. I have one other proof to give—a strong proof—that the upward rolling motion, performed by the rectus superior on the horizontal axes, is a voluntary, and also an unnatural state of the eye—it is this. If we cast the eyes on a book, or on any surface on a level with the book in our hand, we shall only have to wink now and then to bring the secretions over the conjunctiva. But if we roll the eye upwards, so much greater a surface is presented to the atmosphere, and at the same time the fluids are spread out so much more thinly, that after a few moments we have to wink incessantly to prevent pain and to keep the surface moist. The motions of the recti are all unnatural in the above sense used by Sir Charles Bell, but that of the rectus superior the most so of any, for they expose a portion of the sclerotica to the light, which is always hidden by the under eyelid.

166. The lids, in a healthy state, when sleep is deep and easy, are always closed gently together; when they stand a little apart, it is a sure indication of some preternatural excitement. The *elevator palpebræ* are completely relaxed in healthy, dreamless sleep, or in quiet, pleasant dreams; but if there is any disturbance in the general system, either of mind or body, it is imparted to the voluntary muscles, and, of course, those of the eyelids are affected. It is under such circumstances that the eyeball turns upwards under the upper eyelid, for, as I have

before observed, the stimulus of *light is painful to the involuntary nerves when the resisting power of consciousness is at rest*, for when we are awake we can regulate the action of light. Even Sir Charles Bell himself says, 'if we approach a person in *disturbed* sleep, the cornea is turned upwards under the lid.'

167. In speaking of the fourth nerve, Sir Charles Bell asserts in one place that it is 'entirely given to the superior oblique,' and in another place he thinks there is a connection to be traced between it and the respiratory nerves of the face. 'Is it possible,' he asks, 'that there can be any correspondence between the general act of respiration and the rolling of the eye. Led thus to make the experiment, I was gratified to find it so easy to give the proof. On stopping the nostrils with a handkerchief, every effort to blow the nose will be attended by a rapid rising of the cornea under the upper eyelid. And on every occasion when the eyelids suffer contraction through the respiratory nerves of the face, as in sneezing, the eyeball is rolled upwards undoubtedly, through the agency of the fourth nerve.'

168. And Sir Charles Bell calls this a proof that there is a connection between the respiratories and the fourth nerve! If a man *choose* to turn his eyes up when he blows his nose, or yawns, or sneezes, he can undoubtedly do so, but it is a perfectly voluntary action, and is not at all necessary to any of these acts.

169. The monkey has the same muscles of the eye as man. He observes—'I cut across the tendon of the superior oblique muscle of the right eye of a monkey, he was very little disturbed by the operation, and turned round his eyes with his characteristic inquiring looks, as if nothing had happened to affect the eye.' 'On holding open the eye of this monkey, and waving the hand before him, the right eye on which the experiment was made, turned *upwards* and *inwards*, whilst the other eye had scarcely a perceptible motion in the same direction. When the right eye was thus turned up he seemed to have a difficulty in bringing it down again.'

170. Now, as to this experiment, of what is it conclusive? It proves clearly that the rectus superior, in fact, that the recti have the power to move the eyeball in all the directions he specifies—upwards, inwards, and outwards,—for the monkey looked about as usual, as if nothing had happened to affect the eye. That the sound eye did not exhibit these motions so perceptibly, arose from the obvious fact that there was a preternatural excitement in the wounded eye, and, as happens in all similar cases, there was a *desire*—a necessity rather—to prevent the undue action of light on the nervous apparatus, which necessity was not felt by the sound eye.

171. He states that the sound eye had scarcely a perceptible motion in the *same* direction. What is meant by this? When we speak of the *same* direction, we mean, that if one eye moves to the right, the other will move to the right likewise. But if one eye moves to the right and the other to the left, then that is a *contrary* direction. The monkey, no doubt, strove to examine the persons before him; this is an operation in which both the superior obliques are concerned. But one of these muscles being separated at its effective part, it could not aid the other in the motion it required. This peculiar power could not be exercised, because the antagonist power was destroyed. I presume, therefore, that the author meant that there was scarcely a perceptible motion in the *contrary* direction, but this was a motion which the animal did not want, and therefore he did not exercise it.

172 But if this were not the true explanation, we know that disease or wounds can destroy the unity, or peculiarity of any muscular motion. In the case of the monkey, there was not only the pain of the wound, which we know did exist either more or less intense, but there was *fright* also. There might also be a greater pressure on one eyelid than on the other; in short, nothing definite, as to the true motions of the oblique muscles, has been elicited by this experiment, excepting that the recti muscles can rotate the eye on the vertical, the horizontal, and the circular axes, without the aid of the obliques—a fact which the author did not mean to be the leading deduction.

173. He adds, therefore, that 'from experiments it is proved that the division of the oblique muscles does not in any degree affect the voluntary motions by which the eye is directed to objects. This cannot be said of the involuntary, winking motions of the eye. We have seen that in winking to avoid injury, the oblique muscles were in operation, and that the inferior oblique muscle gained in the power of elevating the eyeball by the division of the superior oblique, its opponent.'

174. Now, here, in the *latter* part of the sentence, he attributes the upward and inward motion of the eyeball, to the gain of power in the inferior oblique in consequence of the division of its opponent, and we are led to understand by this that the inferior oblique is an involuntary muscle. But in the beginning of the sentence he says that the division does not affect the involuntary muscles, which, of course, he regards as the recti. If it did not affect the voluntary muscles, then surely the rectus superior was quite sufficient to rotate the eye upwards on its horizontal axis, without calling in the aid of the inferior oblique, which could add no power; in fact, a *greater* contraction of the inferior oblique must have taken place, and the eye ran up in a corner, as was seen.

175. In one of the cases which he cites, he observes that 'by a defect of motion the eye and *eyelids* of the man remained fixed,* and the consequence was that the cornea inflamed and became opaque. Another curious circumstance was that when the eyelids were closed the patient still saw red light through the affected eye, the reason of which was that the eyeball did not turn up when the eyelids closed. If we shut the eyes opposite the window, or before a candle, we shall still see red light coming through the eyelids. But if we make an *effort* to close the eyelids—though they are already shut—we shall be in momentary darkness, *because during the effort the eyeballs are then turned up*. Thus it appears that the dropping of the eyelid would make but an imperfect curtain before the eye, and the eye, to be entirely protected from the light, must have the pupil turned upwards.'

176. I can scarcely believe that Sir Charles Bell wrote the chapter on the muscular motion of the eye; the most careless observer could have come nearer the truth, and yet how confidently he speaks! As it regards the last mentioned fact, when we close our eyes opposite a window or candle, we certainly see red light coming through the eyelids, but the subsequent darkness need not necessarily, as he supposes, proceed from the turning up of the pupil. Does he not perceive that the additional *effort* which is made to draw the eyelids still closer, doubles and trebles the folds of the lids, and thus renders them impervious to light. The patient, which he describes, would not have continued to see red light had he been able to wrinkle the eyelids so as to produce a treble thickness. As to the turning up of the pupil, so constantly insisted upon, we *may* or we may *not* choose so to rotate them, but it is an act of choice, and does not belong to the natural motions of the eye at all; this is a fact of which we can be assured at any moment.

177. When the lids are closed before a candle, if we raise the eyebrows we shall perceive that the lids are much thinner, and that they let in much more light than when the eyebrows are not raised. Even when thus raised, if we *then* turn up the eyeball, this act does not insure that momentary darkness which Sir Charles Bell maintains. On the contrary, the red light is just as perceptible as before the pupil was upturned, and this is in consequence of the increased thinness of the lids. By drawing the eyelids more closely together, we shut out the light, simply, as I before observed, be-

---

* This must be a slip of the pen, as we find that the eyelids were *not* fixed.

cause the curtain is so much thicker. To be sure, when thus pressed tightly together by an *effort*, if we turn up the pupil at the same time the darkness will be still deeper. This is because the pupil gets under a thicker fold of the lid; but if the contraction of the lid is an effort, the turning up of the eyeball at the time that the lids are thus contracted, will be attended with a more painful one. I cannot imagine for a moment, that what costs an effort, let it be ever so slight, can be deemed a state of rest for the muscle.

178. Again, Sir Charles Bell observes that 'there is a motion of the eyeball, which, from its rapidity, has escaped observation. At the instant in which the eyelids are closed, the eyeball makes a movement which raises the cornea under the lid. If we fix one eye upon an object, and close the other with the finger, in such a manner as to feel the convexity of the cornea through the eyelid, when we shut the eye that is open, we shall feel that the cornea of the other eye is instantly elevated, and that it thus rises and falls in sympathy with the eye that is closed and opened. This change of the position of the eyeball takes place during the most rapid winking motions of the eyelids. When a dog was deprived of the power of closing the eyelids of one eye, by the division of the nerve of the eyelids, the eye did not cease to turn up when he was threatened, and when he winked with the eyelids of the other side.'

179. The motion which he describes as having escaped observation, does not belong to *his* class of phenomena at all. It is abstracted from a series of motions which depend upon the position of the external object on which the open eye rests.

180. I have made this experiment frequently, and it has been made by others, but in no instance, *when the experiment was properly performed*, did the eyeballs turn upwards. It depends altogether upon the position of the object on which the open eye is fixed, whether the cornea rises under the fingers. When it *does* rise, or turn up, it is because the open eye is turned upwards just as we are in the act of closing it; and, of course, if the one eye moves upwards the other eye will follow.

181. To make the author's position good, the cornea should turn up, whether the object on which the open eye rests is on the floor, on the table, or on a level with the eye. Let any one make the experiment carefully, and it will be found that, so far from being as the author states, the cornea, if there be any motion, sinks a little when the open eye closes; and when it *does* turn up under the finger, it is in consequence of the *forced* rotation of the other eye. I suspect there was a mistake in stating the case; he meant that when *both* eyes are closed, the opening of *one* of them will cause the other to turn up. Even here, supposing that this was the meaning, it proves against his argument, for it would show that in every instance when the eyes closed the eyeball rotated downwards.

182. If our finger is on the cornea of the closed eye, and we turn the eyes downwards, letting the eyelid of the open eye drop gently as we do in slow winking, not the least motion in the cornea will be perceptible, *provided we do not wink or move the eyeball of the closed eye*. I mean that there is not the least *upward* motion, for there are very few expect enough, even in such simple experiments, to drop the eyelid of the open eye so gently as not to disturb the motions of the shut eye. If it be incautiously done, the cornea of the closed eye will have a slight, jerking motion to the right and left, but no upward movement.

183. If we still touch the cornea, and wink with this closed eye at the same moment that we wink with the open one, we shall perceive that the instant the eye opens again, the cornea of the shut eye rises under the touch. But this proves nothing; for we should not forget that the eyeball sinks a little every time the lids close, either in winking or in shutting the lids, and that when it rises it is merely to attain the position it was in before winking. In fact, in the act of winking, the eye *always* rolls downwards, unless the eye is cast downwards before we wink. The more closely we squeeze the eyelids together, the more the cornea is depressed, or rotated downwards.

184. Every degree of upward motion is an effort, simply because the muscles are not so frequently called upon to roll the eye upwards, but there is scarcely a perceptible effort in turning it downwards, or in keeping it on a level with surrounding objects.

185. As to the case of the dog, in which the nerves of the upper eyelid were divided, nothing corroborative of the author's argument can be deduced from it. We must draw our inferences from a *natural* state of things, or we can prove the most absurd doctrines. The dog was unable to drop the eyelid over the cornea, so he was *compelled* to raise the cornea, that some little protection might be obtained from the edge of the upper eyelid.

186. Nature directs us to certain acts for the preservation of the whole or part; even common instincts are changed to meet exigencies. If we are prevented from exercising certain faculties or functions, we substitute some other process by which our object is attained, but this does not prove that the process is the natural one. If a man loses his forefinger, he puts the pen between the thumb and middle finger; this is awkward enough, and it embarrasses him for a time. So when the nerve of the eyelid was divided, thus rendering the muscle useless, the rectus superior partially supplied its place by drawing the eyeball upward to meet the lid.

187. In what way but this would it be possible to excite the glands so as to lubricate the conjunctiva; and that a fluid secretion *must* cover the surface of the eye, is apparent to the most trifling observer, for, as I have before remarked, if this surface remains dry for one moment, the pain is intolerable.

188. Since writing this chapter, operations for strabismus or squinting, have become very frequent. Nothing surprises us now. Dr. Reid, who paid such minute attention to this defect, if he were living, would be very much astonished to learn that the rectification of the eyeball, which excited his thoughts so strongly, has been accomplished so successfully, so speedily, and with so little pain.

189. It is one of those operations that requires not so much practice or adroitness of manipulations. All the practice in the world would not be of service to a clumsy operator. To perform the operation effectually, a man must not only have dissected many eyes, for without a perfect knowledge of the anatomy of the eye, very serious mistakes may ensue, but he must be a delicate operator. When it is understood that *the superior and inferior obliques have no concern at all in the distortion*, no surgeon would think of dividing either of those muscles. These muscles are simply for the purpose of balancing the eye and for keeping it prominent; and if they were to be cut across, the eye would certainly sink back a little, and run up or else down diagonally. I have observed, in some of the late papers on strabismus, that one or two cases are represented as having such a result.

190. Great care should, therefore, be taken not to touch the inferior or superior oblique muscles; there is not one eye in a thousand which is affected with a distortion of the superior oblique. There certainly is not much pain in the operation, and the benefits are incalculable; for not only is a more pleasing cast given to the countenance, which in an inveterate squint gives a sinister expression, but there is a decided improvement in vision.

191. An eye which has for many years been prevented from conveying impressions simultaneously with the straight eye, acquires a different focus. Sometimes the cornea becomes more convex; in fact, I scarcely ever saw the eye which was turned inward without its being much more shortsighted than the other. If the cornea of the squinting eye is closely examined, it will be found differently curved from the other, the arch, or centre of the curve being more outwardly inclined. In due time, if the operation of dividing the tendons has been skilfully done, the cornea will recover its natural curvature, and the axes will correspond.

192. Frequent anomalies will occur in cases of this kind which are puzzling to the physiologist; but time will disclose to us that the external muscles have no double duty to perform. Their use is to regulate the *motions* of the eyeball, and not to alter the convexity of the cornea. Whenever this convexity in the distorted eye is greater or less than in the other eye, the cause must be sought for in the constant attempt at uniformity of focus.

193. In this way, too, we must regard the difficulty of getting the axes of both eyes to act in concert—*seeing double*, as it is termed—which defect often occurs after the removal of a cataractus lens. Even this obliquity is soon rectified, and the nerves and muscles all pull the right way.

194. This new operation is one of the most simple and beautiful improvements in modern surgery; and the only wonder is, that it was never attempted before. I recollect that several years ago it was stated that a Dr. Scudder, of New York, had performed such an operation on the eyes of a young lady with perfect success. The whole faculty ridiculed it; and in fact, at that time, it was a hoax. There is no doubt that it made an impression on the mind of some ingenious oculist, for the paragraph was copied in some of the foreign papers; and thus has a blessed reality arisen from a mere jest.

195. This operation of dividing the rectus internus is *now* performed by almost all our surgeons, and with scarcely a failure. At first there were some difficulties, but this arose from *sheer ignorance* of the true positions and motions of the different muscles; in fact, the eye was never minutely examined with respect to its strict anatomy until ophthalmic surgery was confined to the oculist; and no one has contributed so largely to distribute this knowledge as Dr. Elliott. I still know many excellent surgeons and physicians who have scarcely any more knowledge of the anatomy and physiology of the eye than they acquired while attending lectures in their youth, and every one knows the amount of *that* knowledge.

196. It sometimes happens that the squint returns after the operation was thought effectual; this arises from the joining again of the divided muscle. Dr. Ammon, of Saxony, was the first who adopted the plan of cutting out a piece of the muscle, and this completely obviated the difficulty.

MEDICAL REFORM.

Medical Reform—Medical Coroners—Hospitals and the defects of their present management.

No. 1.

TO THE EDITOR OF THE LANCET.

SIR:—

Some time since, we read the third and fourth letter of Dr. Harlan, on French Surgeons, &c.; and recently, an article on Hospital Reports—both papers were in the Medical Examiner of 1839. We trust that the remarks made will not be understood as applying to any particular institution or party; they are intended for the purpose of exciting attention to the great defects in our medical policy.

No one who has secured to himself the slightest share of medical observation and reading, can avoid the conclusion that a medical reform is imperiously demanded; but the great difficulty is to ascertain at what point this reform is to commence, and who are to undertake it. For instance, there is the subject of coroners. Not only professional men themselves, but all the enlightened part of the community, are aware of the necessity of having medical men as coroners, and yet no one sets about it. In a legal as well as humane point of view, it is of vital importance to appoint physicians to the office; yet instead of substituting men of skill for the ignorant Dogberrys who now officiate, we show the utmost indifference on the subject—just as if a change were impracticable.

The first step at reform, therefore, should be to have medical coroners; but there will be a hard struggle, and much time consumed, before this can be accomplished, for even the members of the profession, at least some of them, will object to the substitution as strongly as others. The community at large, as soon as the propriety of the measure is made manifest, however, will not only get reconciled to the innovation, but earnestly desire it. The benefits arising from its partial adoption in England, should encourage us to persevere until the object is accomplished. That it is not immediately carried into effect here, is very extraordinary, as there is not a man who is enlightened on the subject who does not perceive that the measure is absolutely necessary.

A coroner should be a physician of good standing and of good principles, for there is much to call forth his judgment and his impartiality, as well as a knowledge of his profession; in fact, he must not only be a physician but a surgeon also, for here his anatomical skill is put to the test. Of course there should be a regular salary attached to the office—one or two hundred dollars a year—or else a small fee for each case. There should likewise be other considerations and immunities, for the duties of a coroner are at all times unpleasant and often revolting.

The next step at reform, is to labor for a more liberal and permanent endowment of our medical colleges, so that the professors need not depend on precarious fees. As to the mode of granting diplomas, that subject is now being discussed; and although the plan proposed is new, yet with some modifications which reflection will suggest, it is a far better one than that which prevails at present. Students should receive instruction gratis, or at least their terms of admission to each course should be less than half that they now pay. There is no fear that the colleges would be overrun with applicants, for the number could be limited. At present there are sometimes from four to five hundred in some colleges, and by far too many of them receive diplomas and are thrown upon the world, injuring or destroying instead of saving life. If the professors had a regular salary, such is human nature, a diploma would be granted with more regard to the qualifications of the applicant than it now is—surely this will be an important reform.

Another reform is in the hospital management; and here the imperfections of the present system crowd upon us so closely that it is difficult to single out a prominent one for a beginning. But before proceeding further, let us inquire how it happens that in surgery, at least, taking it in its enlarged and general sense, we are so much behind other nations, and why we submit so quietly to be considered as inferior. The very glaring fact that our young men go abroad to finish their medical education, proves that we consider their schools as superior to ours.

It is said that one of the causes of this indifierence and supineness, is owing to the fickleness of the community, who never are aware of the propriety, nay *necessity*, of a steady and liberal patronage. They are easily stimulated at first, and give freely to public charities when the project is first recommended; and they take great pride in carrying it fairly through. But they feel injured, and are sometimes resentful, if reminded from year to to year that it is obligatory on them to continue their aid. More than one will tell you that they have done enough for the institution, and it is now time that others should assist also.

The truth is, that it is much more easy in America to get a donation of many thousand dollars—both from corporate bodies and individuals—than to abstract a very small sum from year to year; and yet who shall say that we are a nation guided by impulse? Of course, this discrepancy arises from a *defective moral training*, and from the fact that the natural temperament partakes of the peculiarities of the government policy and patronage, which is exciting and fluctuating.

But it is to be hoped that this pernicious mode of removing men from office at the whim and power of every new cabinet, will be soon reckoned among the things that were, for we are becoming wiser, and that peculiarity of moral temperature will fade away before the broad light of knowledge or experience which is now pouring in upon us. It is imported by steamboats, and carried over swift railroads to every section of this vast empire, and every man of common sense feels that where one eye overlooked his actions formerly, there are ten thousand now. He knows that to be accounted wise he must be consistent and uniform. He finds that no one, in the present enlightened age, will tolerate what *he* so fondly termed the *eccentricities of genius*, but which the world now calls a want of good moral training. He loses *caste* if he becomes fickle in his charities, and withholds his usual mite for the support of a charity which he contributed so largely to bring into existence. It is disgraceful to let the community of sufferers languish for the want of good medical aid, both in private and in hospitals; but doubly disgraceful, to let the colleges and hopitals perish or become a nuisance, for the want of a steady supervision and patronage.

And here it is not out of place to animadvert upon that defect in our early moral training and school discipline which allowed of such laxity. That freedom which we gained by the Revolution extended itself throughout every system, and before it could be regulated, it acted most perniciously upon the character of the tender youth of the nation. This defect in the early education of our children is gradually being overcome by the friction of experience; the school-master *at home* has injured instead of improving the intellects and morals of his pupils; yet the school-master abroad, though he moves at too quick a pace, and tasks us beyond our strength, shows us how much we are capable of doing—how much he might do if the foundation had been sound.

'Look at your young men,' he cries; 'they go through the routine of what is called a literary and classical education, and yet they can scarcely give a definition of the simplest words in use. They run through a course of moral and natural philosophy—such a course!—the reservoir is crammed full of heterogeneous gatherings, and at a prescribed time their education is pronounced complete. They are then sent to divinity, law, or physic, and are let loose upon society to fit souls for heaven, to mend fortunes, and to preserve health!'

Reform, therefore, must be preluded by teaching a child to comprehend what he learns—to comprehend the *meaning of words*—and not to be satisfied if they merely comprehend the *sense* of a passage. It is this *minute* drilling which is to give strength to the intellect, and thus prepare the way for moral training. This may appear fantastic and evince a contracted judgment, but the experiment has been tried and found worthy of adoption.

But this cry of reform is even louder in Europe than in our own country; and this is owing to the fact that they are more aware of the defects of *their* system of education, and of the abuses in their institutions. No one can mourn over a defect, if not sensible of its existence; and certainly the Americans, at the present moment, do not feel that their schools, their colleges, their hospitals, and their infirmaries are conducted in a pitiful manner.

It would, however, appear invidious, and to say the least, very *unwise*, to wince at reform in those institutions already existings. Attempts of this kind have been frequently made, not only without success, but with evident increase of evil. To begin at reform, we should commence at the foundation, for it is a well received axiom that it is better to build a new house than to repair one which is old and ricketty.

Hitherto the public has appeared very indifferent in the matter of those two *great trusts*, hospitals and infirmaries; a strange callousness when it concerns human life itself. No sooner is a house built, and a system organized, even to the *bye-laws*, than public interest ceases; it is then left to the sole management of governors and trustees. Men who have grown old in such establishments, look upon them as part and parcel of themselves, and resist innovations of every kind. In general, as they do not belong to the profession, they are not aware of any radical defect; on the contrary, after being satisfied that the institution, from one end to the other, is in the neatest order, and that nurses are in abundance, they dose away their life in the happy belief that it is the best conducted charity in the world.

And so it is as far as cleanliness and order are considered, which are certainly essential points, but further than this there is no suspicion on their part that a trifling change here and there would be very beneficial. To convince them that *reform* is wanted, would be a surprise indeed, and they would resist with indignation any attempt at improvement; just as if a code of laws suitable to the exigencies of the time, when enacted, was sufficient to regulate an institution now requiring a more enlightened supervision. Does it not now strike the most casual observer as absurd, when the governor and trustees of an hospital are not medical men?

If the trustees of such institutions would only read the *reports* of the European hospitals, and then read the comments made on our own, some benefit might result from it. Idle people and flatterers go through the buildings, praise the order and neatness there seen, contrast it happily with those abroad, make a report of their visit in some daily paper, and the trustees are satisfied. But is this all that is required in an hospital where there are from fifty to a hundred poor suffering creatures, who are more desirous of alleviation from pain than any other boon? Necessary as cleanliness and order are to them, they require something more. I shall presently speak of this again.

The one fact alone, that young men, after going through a course of lectures; are compelled, as it were, to finish their medical and surgical education abroad, is enough to prove a gross error somewhere. To secure a further share of patronage they *must* go to Europe, at great expense and inconvenience too, and "walk the hospitals there." What is the deficiency in our own hospitals to produce this necessity? This question is easily answered.

The student of medicine and surgery is in want of daily full and clear *bed-side*, or, as they are called, clinical lectures. He is in want of well conducted surgical operations—of more frequent dissections—of more frequent post-mortem examinations, and he is in want of copious reports of well-marked cases of disease. How slovenly conducted, how scandalously defective are the clinical lectures in our hospitals—how few in number are these dissections, (in consequence of the high price of subjects,)—what bunglers, *generally* speaking, these dissectors are—how few in number are the post-mortem examinations, and how meagre and unsatisfactory are the report of cases—compare them with those from the hospitals in Europe, and ours are scarcely deserving the name. Even the reports we have are from *young* physicians, the older ones thinking it too much like quackery to let their name go forth attached to an hospital or private report; yet if they would get over this nonsensical fear of being thought quacks, of how much service would their reports be to young physicians?

And here another question arises—how is it that in other countries men of long established reputations are so exceedingly desirous, and make such strong efforts to obtain professorships in medical and established institutions, including hospitals and infirmaries. The applicants are generally men in years, who might naturally desire that repose which a successful practice ensures. The cause of this anxiety and strife to obtain a seat in these public houses of charity, arises from a knowledge that none but men eminent in the profession are ever elected to those chairs. However highly a man may be estimated among his patients and the community in which he resides, he knows his fame scarcely reaches further; but the moment he is chosen to the august station of presiding over the rights and infirmities of the *sick poor*, he becomes an object of interest to the whole nation, and his name is spread abroad to the four corners of the earth—and all men are ambitious.

A man is not elected through any petty favoritism, or mean party feeling, but solely through entire confidence in his complete fitness for such heavy responsibilities. But in *our* hospitals—and who shall contradict it—*young* physicians seek these high stations for the purpose of *obtaining* a reputation, and their friends go all lengths to place them there. It is the strife of ignorance, and becomes absolutely criminal in the guardians of such institutions to prefer the claims of young men, to those who are older in years and far superior to them in skill—I allude now particularly to hospitals.

The trustees of hospitals are not aware that unless a physician has been in long and close attendance on diseases, he cannot, on the instant, take up a case of fever with confident hopes of cure, when the fever has arrived at a certain height before the patient entered the hospital. A poor man is scarcely ever brought there until the disease has made heavy progress. The previous knowledge which a physician of large practice has obtained, enables him to grapple with disease in every phase, and he can commence treatment instanter. Whereas a young man, with limited knowledge—for there are diseases wherein intuition or genius can do but little—blunders through with a sort of guess work, or a resort to reported cases as well as experiment, to the great injustice of the poor patient.

The choice of a medical man for so important an office, should fall on the one who has the best reputation for skill and *humanity*. He should be elected, not for his own advancement, but for the simple and righteous purpose of prescribing for, and watching over the interests and infirmities of the sick creatures in these hospitals—the most tender and sacred of all duties, and second only to the salvation of souls. I repeat again, that it is the high respect attached to such professorship and such duties, which makes the demand for them so great and that they are so eagerly coveted by men of eminence. Added to this stimulant, the invincible consequence of such elevation, a great increase of private practice of a very lucrative kind.

Wherever great surgeons and physicians are to be found, there will the young men who have just received a diploma go for the completion of their medical education—already pronounced complete! If the professors in our American colleges knew what was necessary to be taught, they—many of them—would vacate their chairs, for they would find themselves incompetent to the task. How are pathological and comparative anatomy taught in our colleges? How are vegetable and animal chemistry taught there? Could Liebig have written his great work from instruction received here? How are theoretical and practical botany taught? If physicians have lived and died without the knowledge here specified, this does not prove that the sciences enumerated are not necessary to the complete education of a medical man; do our professors teach these vital branches of study practically?

The time has arrived when the study of medicine will not be confined strictly to medical practitioners; it will become the better part of education to those who are destined to go forth as missionaries. What a world of benefit would they confer on the poor heathen, whose benighted mind is more clouded by physical distress! What a flood of new wonders would the missionary pour upon us, if he understood anatomy and botany—how easy to be learned. There is not a missionary abroad who does not lament his ignorance, for he finds how much more effectual would be his labors if he had even a slender knowledge of all this.

Even those destined to the law should be well groomed in medical jurisprudence; there is scarcely a lawyer, in decent practice, who has not been called upon for medical knowledge in cases where life or property was at stake, and many a client's interest has suffered through the ignorance of his law adviser. Our lamented General Hamilton, even in times when education had but slowly advanced, was sufficiently well acquainted with all such points of medical knowledge as would be apt to bear upon a case. He was likewise well versed in Geography and Geology, as there are many now living can testify, and not a particle of his knowledge was useless.

If such should be the studies of the student of medicine, law or gospel, even necessary to the complete education of a gentleman, how imperiously necessary is it that the *trustees* of hospitals and colleges should have a partial knowledge of what is going on within their rule. Ought they not to be well informed of what is done in Europe, as well as in their institutions at home? They should not only compare the different reports with their own, but they should be vigilant and energetic in requiring the most unremitting attention towards the sick, from every officer belonging to the establishment.

We are not deficient in genius or talent, and the public if rightly instructed would not deny their patronage. But they have so often been deceived by the weakness or humbuggery, and final failure of even the best projected systems, that they hold back their assistance even when the scheme is really useful and practicable. But what is most to be deplored, is their total indifference towards improvements in these two vital objects—medicine and surgery and all that is connected with these acts. They are not alive to the *despicable evil of inferiority*, but rest content that a house of charity is built, that it is kept in neat order, and that officers are duly elected.

With these circumscribed views how can they otherwise imagine than that these officers elected by themselves, will take due care of the sick and treat them with skill and humanity. But let them learn that their duties extend further than presumption. To go deeper in the matter, they must not hold out a promise to the ear and break it to the heart. They must find it their sacred duty not to trust too implicitly to the report that *all is right*, and they must finally never trust entirely to the house-surgeons and other officers engaged in the institution.

One reason why there should be such vigilance is, that young men soon lose their fine sensibilities when in constant attendance on the sick, who are generally exacting and querulous. Many of the poor sufferers are unnecessarily frightened at every new turn a disease takes, and they therefore require steady treatment and gentle soothings. If the trustees were strenuous in recommending and enforcing an equable and tender mode of treatment, it would not only improve the humanities of the physician but materially assist in relieving disease.

A young physician once observed, 'that fearful he might become callous and hard-hearted, he was about to abandon his profession.' This arose from observing the unfeeling and indecent haste, and the coolness and often brutal manner of the physician as he went his rounds through the wards. He saw that each poor creature cast an imploring look, wanting to speak of his little troubles, how miserably he had passed the night, how his temples throbbed, and how dry and parched was his tongue; but the doctor was in too great a hurry to hear *all* this, and yet so little! He approached a bed where the patient's willing hand was ready for the doctor's fingers, for the poor think greatly of the pulse. The nurse was asked perhaps how the man had rested, but it was evident the doctors did not listen. He sometimes looked at the tongue, then prescribed and hurried off to the next bed!"

We are aware that the generality of physicians, like men of other professions, are as much intent on growing rich as to obtain fame—knowing, as a consequence, that a man cannot acquire riches unless he have a great practice, and that this very practice proves that his skill is acknowledged. But if he only knew how the poor patients hate such a callous, hard-hearted physician, what curses followed his name, how his very horse is scowled at as the carriage rolls along, he would think it worth his while to stop a few moments at the bed-side of a poor men in the hospital, as he does at the bed-side of the rich man; he would *shew* some signs of feeling though he felt none. He would ask a few questions, console the poor creature by a few kind words, smooth his pillow and make a pretence of arranging the bed clothes, all of which would have a salutary effect; and he would leave the sufferer with a lighter heart, and consequently with a mitigation of pain.

It may be said that the physician has no time to listen to, or console the poor hospital patient; has he not? Then dismiss him, for depend upon it he is unfit for so sacred an office. Not time! why almost all the knowledge a young man gets of disease is from the lips of the sufferer, as he follows the physician in his rounds, and he finds the best medicine this physician can give are soothing words. Not time! five or ten minutes there will give him years of serenity in another world. Not time! well, if an hour is not sufficient to do his duty through all the wards of his department, exact *two* hours. Let the trustees look to the *intention* of the charity—what is it for? It is to ameliorate and eradicate disease. And is not this intention totally disregarded by the generality of medical officers under the present relaxed system.

I do not say that this callous negligence is peculiar to *our* physicians and surgeons, on the contrary we know that in France at least, and in England also, though in a less degree, this heartlessness prevails to a frightful extent. In the London Lancet, one of the ablest, *most searching and salutary* periodicals in England; there is in No. 7, Nov. 3, 1838, the following report of a house visiter to one of their hospitals:—

'In the discharge of his duty he had questioned the patients as to when they had been visited by their respective medical attendants, and to his very great surprise he was told by those who had the name of Dr. Bright over their beds, that this gentleman was a *total stranger* to them all; *not one of them knowing him by sight*, although some of them had been in the hospital *for weeks and months*. On proceeding to the surgical wards, the replies received by this house visiter, Mr. Green, were equally startling. He found upon questioning the patients of *two* of the surgeons, that they had not been seen by those gentlemen for four or five weeks, and some of Mr. White's patients declared that he was totally unknown to them!'

And the above is the report of a house visiter of the Westminster Hospital!

In the same number are some remarks on the trial of Sir Anthony Carlisle, who was accused of scandalous neglect. The editor observes, that all the facts reported against him in the Lancet were fully substantiated. He cites one case to show how gross was the neglect, it is as follows:—

"Thomas Holmes was admitted on the 22d of August with an injury of the wrist joint, sustained at the gas factory. He was made Sir Anthony Carlisle's patient on Wednesday. Sir Anthony did not see him till Saturday, the 25th, and the three days allowed to elapse had not passed away harmlessly, the disease was not as indolent as the surgeon. The man grew delirious on Friday, the 24th, (the day before the surgeon saw him, though the man had then been waiting for him since Wednesday, the 22d,) and when did Sir Anthony Carlisle again visit the delirious patient committed to his charge, and with which he forbade the assistant surgeon to interfere? Again on Saturday? No.—On Sunday? No.—On Monday? No; not till Tuesday, the 28th, when the man was lying in bed quite exhausted. And what did this assiduous surgeon do when he visited poor Holmes on Tuesday? He "looked at him, (one of Carlisle's own witnesses tells the jury,) he did not ask him any questions, he made no inquiry into the previous history of the case."

Now of such gross, criminal neglect we do not think our own hospitals and infirmaries can complain, but the lesson is a salutary one and shows the necessity of selecting careful and honest house-visiters, that the surgeons and physicians may be kept in the strict line of their duty. The conscientious officer or medical attendant will have nothing to fear from this careful watching, and the unprincipled will have every thing to dread. In our next we will continue this subject. Q. E. D.

A Practical Treatise on Venereal Diseases; or, Critical and Experimental Researches, on Inoculation, applied to the Study of these Affections, with a Therapeutical Summary, and Special Formulary. By Ph. Ricord, M. D., Surgeon of the Venereal Hospital of Paris, etc. etc. A New Translation from the French. New York: P. Gordon. 1842. 8vo. pp. 339.

A very useful and interesting work. The reputation of the distinguished author must ensure a favorable reception to this treatise. The translation is accurate and elegant. We cheerfully recommend it to the notice of the profession.

The Dublin Practice of Midwifery. By Henry Maunsell, M. D. With Notes and Additions by Chandler R. Gilman, M. D., Professor of Obstetrics, &c. New York: William A. Le Blanc, 377 Broadway. 1842. 12mo. pp. 292.

A most excellent manual of this important branch of medical science. We do not know any one more calculated to facilitate the progress of the student, and for practitioners it is well adapted to answer the purpose of a *vade mecum*. The editor has added a few judicious notes, and altogether its American dress will not detract from the value of the volume. We heartily commend it to our readers.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, October 29, 1842.

We have been much gratified in learning that a course of Lectures on Physiology, will be delivered in this city, during the ensuing winter, by Dr. Robert Nelson. Dr. Nelson has been engaged in a very extensive series of experimental researches in this interesting and important department of science, for upwards of twenty years; and in addition to the vast amount of information thus acquired, he brings to the elucidation of his subject a zeal rarely met with,—great originality of intellect,—much fluency of language,—a highly pleasing manner,—and that practised skill by which sophistry and error are successfully exposed. We therefore anticipate for these lectures that cordial welcome, which such genuine worth, and talent, and science are entitled to receive. Much more we would desire to say respecting this eminent practitioner, and earnest follower of science, but we know too well, and respect too highly, his unassuming modesty, and refrain from giving full expression of our estimation of the scientific and professional attainments, which have long since gained for their amiable possessor a no common reputation. Indeed, we do not think that it is necessary to bespeak favor for the forthcoming discourses. Physiology is not at present taught in New York, and now that the importance and value of an acquaintance with it, are beginning to be appreciated, the announcement of Dr. Nelson's Lectures must be of itself sufficient to secure a numerous class.

Among the numerous 'Cards,' Manifestoes, and 'Circulars'—explanatory, apologetic, defensive, abusive, and self-laudatory, which the Faculty of the Stuyvesant Institute Medical School, have found it necessary to issue, during the few months of their existence, that one which is now going the rounds of some of the papers, is not the least remarkable and characteristic. This 'James Alexander Houston' seems to have given these gentlemen terrible trouble. At all events they seem to think his demolition absolutely necessary. In their last 'Circular' they no doubt supposed that they had quite annihilated him. But it is quite evident that even all the artillery of abusive epithets there applied to him, did not finish the ill-fated man. He is still in *statu quo*, and another volley is called for and discharged.

But what are the 'offences committed' by this troublesome man, which have so galled this Faculty? We will enumerate them:—

First. He refused to allow the *Lancet* to be the servile organ of the Stuyvesant School.

Second. He exposed Dr. Mott's illiberality and injustice toward the late Dr. Bushe, Dr. McLellan, of Philadelphia, Dr. A. H. Stevens, of New York, and many others; and he also exhibited Dr. Mott in *propria persona*, allowing him to be judged out of his own mouth in his lectures.

Third. He exposed the domestic and disgraceful quarrels of the Faculty.

Fourth. He showed that the Faculty did not fulfil their promises to the students.

Fifth. He showed that the instruction afforded by this Faculty was inferior to that of the venerable College of Physicians and Surgeons, and proved this by the fact, that *all* the students of the former who presented themselves as candidates for admission into the naval medical service were *rejected*, whilst those of the latter *passed*.

Sixth. He exposed Dr. Bedford's unparalleled plagiarisms, which have procured for him the appellation of the 'Phenomenon.'

These are his sins against this Faculty—their commission explains the animosity of his opponents.

We deny the imputation of ill-will towards these men. We have sought to do them good. He is not the best friend who uses only soft words. Whilst, therefore, we regret that our friends are so manifestly ungrateful for the salutary correction which they have received, we rejoice that they have some *sensibility* in their composition. They *feel* the discipline—hereafter, we are encouraged to hope, they will *appreciate* both it and the motives of its author.

The *Boston Medical and Surgical Journal* is extremely desirous to learn all about a gentleman, who advertised some time since in the *New York Lancet*, for employment as a public lecturer, or surgical assistant to an established physician. The advertiser stated that he had performed the operation of lithotomy fifty times, and other operations proportionably; and our Boston cotemporary, with characteristic simplicity, marvels how such a man, who must have been once so extensively patronized, finds it necessary to ask for employment. Surely, surely, Dr. Smith's knowledge of the world must be very limited, if he requires an explanation of such a matter. Do the members of our profession possess an immunity from those mutations which so often cloud the fortunes of other men? But we will 'enlighten' our Boston friend, the more readily because his 'sympathies are ready to be excited to activity.' The advertiser is a gentleman, who for many years discharged, with unsurpassed zeal and skill, the duties of surgeon to a large hospital, and attended to a most extensive private practice. Political misfortune swept away his well-earned fortune, and drove him to the land, styled the asylum of the oppressed. There the warm friends, who were proud to correspond with him in other days, knew him no more, and with all the hollow-heartedness of their class, sneered at the man, the latchet of whose shoe they were not worthy to unloose. No other resource but the public intimation which so surprised our Boston friend, was left to the exiled patriot. But his merits are already beginning to be known here, and we trust ere long to see him in his appropriate position.

We publish in our present number the first of a series of articles on various topics connected with 'Medical Reform.' The writer has enjoyed no ordinary opportunities of studying the subjects discussed. That these opportunities have not been allowed to pass unimproved, is very evident to us, and must be equally evident to all enlightened readers. Let those articles be attentively studied, and let their sound reasoning and wise suggestions make deep and permanent impression.

The Editor of the *Boston Medical and Surgical Journal* will please correct, in his next number, the mis-statement that 'Dr. Mott, of New York, has commenced an action for libel against the Herald of that place.' The assertion is without the slightest foundation.

THE MEDICO-CHIRURGICAL REPORTER.

Death from Intemperance--Post-mortem Appearances.

TO THE EDITOR OF THE LANCET.

Sir:—

Should you think the following case of sufficient pathological interest to be worthy of an insertion in your valuable journal, it is at your disposal.

Oct. 5th, 1842. Was requested to visit H. W., a man aged 45, of sanguine-bilious temperament, who for the last fifteen years has been addicted to the use of ardent spirits. During this period the habit increased gradually, until at length he consumed one or two quarts daily. Previous to the commencement of this habit, and for several years afterwards, his health was good. For a considerable period of his life he was actively engaged in mercantile pursuits, but for several years past has devoted some attention to agriculture. Found him vomiting and purging freely. Learnt that for several months his appetite has been much impaired—has frequently vomited his food in an undigested state. Pulse accelerated, thirst urgent, countenance anxious, mind incoherent, discharges from bowels frequent, and of the color and consistence of tar. Complains of sinking sensation at the epigastrium, and of great prostration. Has been drinking great quantities of ardent spirits during the last three weeks. Did not call for aid until his stomach revolted at the treatment and rejected every thing. Directed a mustard poultice to the epigastrium. ℞. Calomel, grs. xv.; opium, grs. ij.; to be followed in the morning with sulph: mag: ʒss.

Oct. 6. The patient could not be prevailed upon last evening to take the medicine prescribed. Drank a pint of spirits during the night, which was immediately vomited. Consented to take the calomel and opium, which operated freely in the afternoon and evening, during which time he drank spirits, contrary to advice, which the stomach rejected. Regimen antiphlogistic.

Oct. 7. Rather more quiet; slept several hours this morning. Retains mucilaginous drinks and gruel longer on his stomach than yesterday. Says that he has had no pain in the stomach—no tenderness on pressure in the epigastrium or in the region of the liver. Vomits occasionally. Bowels moved by injections of sulph: magnesia.

Oct. 8. Slept well until three o'clock in the morning. Stomach more irritable. Applied a blister to the epigastrium. Bowels moved by a mild enema; pulse softer and less frequent; thirst less urgent.

Oct. 9. Slept a little in the fore part of the night, but after midnight became so delirious that several persons were required to keep him in the room. Found him more quiet in the morning; has taken no spirits, and during his lucid intervals, says he will drink no more if he recovers. Took a little gruel, which was retained several hours, but was then vomited unchanged. Blister has drawn well. Remained more comfortable through the day; but towards evening he again became restless, and about ten o'clock, in a paroxysm of delirium, he got out of bed under the impression that the house was on fire, went to the door of the room, and to one of the windows, which he opened, and was with difficulty persuaded to return to bed. In the act of getting into bed he was seized with acute pain in the epigastric region, gasped for breath; his skin became covered with a profuse clammy sweat; pulse small and extremely rapid; and from this time he continued to sink until one o'clock, when he died.

Autopsy nine hours after death.—On opening the abdomen a considerable quantity of dark brown fluid was noticed, which on being removed by sponging, was found to have issued from a perforation of the stomach situated about an inch and a half from its pyloric orifice. The stomach contained a few spoonfuls only of a fluid similar to that just described. The mucous membrane presented the appearance of having been in a state of high inflammation throughout its whole extent; it was highly injected, and in several portions, particularly along the greater curvature of the stomach, the color was very dark. Near the pyloric orifice the mucous membrane was in a state of ulceration to the extent of an inch and a half in circumference. The mucous coat was entirely destroyed over this space, and the muscular nearly so. The perforation was four or five lines in diameter, and situated in the posterior walls of the stomach, half an inch backward from its convex edge, and an inch and a half from the pylorus. The peritoneum for several inches around the perforation exhibited traces of recent inflammation. The mucous membrane lining the duodenum was highly injected, and all its coats were much thickened. The liver was enlarged nearly one third, and the gall bladder was distended with bile of the color and consistence of tar.

Respectfully, yours,

R. A. Severance, M.D.

Saxton's River, Vt., Oct. 17th, 1842.

[The following elaborate and valuable paper is extracted from the 'Transactions of the Society of Alumni of the College of Physicians and Surgeons.' It is highly creditable to its young and talented author.—Ed. L.]

On Carcinoma in General, and Cancer of the Stomach.

BY JOHN LE CONTE, M. D., OF SAVANNAH, GA.

Cancer, Carcinoma, or Scirrhus—as it has been variously denominated—has been considered one of the most malignant and intractable diseases, from time immemorial. We shall make a few observations on the subject of Cancer *generally*, before proceeding to the immediate object of this monograph; since there must necessarily exist an intimate connection between the disease considered *generally*, and any of its particular forms which are developed in certain organs of the body, as for example, in the stomach.

With regard to the etiology of cancer, a variety of ingenious and amusing hypotheses have been devised. During the reign of chemical pathology, a primary vitiation of the blood was put in frequent requisition as a part of its exciting cause—being supposed at one time, as by Paré, to be loaded with bile; at another, as by Dionis and Carmanati, with an acid; at another, as by Wiseman, with an alkali; at another, as by Peyrilhi and Ewart, with arsenic. (Fletcher's Elem. of Gen. Path. by Russell and Drysdale. Edin. 1842. p. 94.) From some experiments on cancerous matter, Dr. Crawford concluded, that it consisted chiefly of *hepatized ammonia*, which, he said, effervesced with sulphuric acid. Seizing this idea, Dr. Parr argued that cancer is caused by an *excess* of *ammonia*, conjoined with a redundancy of *sulphur* in the system! (Good's Study of Med. Doane's ed. N. Y., 1836. Vol. 2d. p. 84.) By what process, or succession of processes, the bile, or acid, or alkali, or arsenic, or ammonia and sulphur, could have been generated, or could have found its way into the blood; and even supposing any or all of them to have existed there *ab initio*, by what means the said blood could have deposited them in various organs, and among these organs, selected some in preference to others, is not told us.

The prevalence of the doctrines of the Linnean school, soon led physicians to ascribe a parasitic origin to several diseases. Justamond and Dr. Adams, and more recently, Jenner, Baron, Kühn, and Carmichael have successively advocated the entozoötic character of cancer and tubercle. (Fletcher's Elem of Gen. Path. cit. ante. pp. 151–223–et 231.) In Mr. R. Carmichael we find an ingenious and zealous defender of this zoophytic hypothesis. At the Sixth Meeting of the British Association for 1836, he laid before the Medical Section a paper on this subject, in which his former views are supported by a more rigid and extended course of investigation. (Vide Sixth Report of Brit. As., vol. 5. Trans. of Sections. p. 113.) The prevailing opinion, supported by many influential authorities, as Laennec, Louis, Roch, Bouillaud, and Magendie, Cruveilhier, Carswell, and their followers, is, that tubercles and analogous formations, are distinct, organized tissues, the result of a new secretion. (Fletcher. Op. cit. p. 223 et seq.) In fact, Clarke, Carswell, and Todd insist upon the absolute identity of some of these diseases, as for instance, of tubercle and scrofula.

Dr. Hodgkin, in his interesting work on the Morbid Anatomy of the Serous and Mucous Membranes, (vol. 1, 9th and 10th lectures,) has presented us with an explicit and truly philosophical development of his new and ingenious views on the structure of carcinomatous and other heterologous formations. He maintains that every scirrhous tumor, when examined under favorable circumstances, may be demonstrated to be composed of a series of *encysted* packets of pedunculated pyriform bodies, so arranged as to afford a satisfactory rationale of the radiated appearance so strongly insisted on by most authors as peculiarly characteristic, and which is very conspicuous when the section passes through the indurated portion, in a direction transverse to the axis, or common origin of the *primary cysts*. It is proper to remark, however, that this hypothesis has been attacked by Dr. Carswell, with his accustomed acuteness of reasoning; and that he maintains that the cystiform arrangement assumed by Dr. Hodgkin, is a character which is far from being constant in scirrhous tumors—that such growths frequently originate in the cellular tissue outside of cysts, and by progressive development, encroach upon serous cavities in the neighborhood—and that they occur in organs where no cysts are detectable at any period of transformation. (Vide Cyc. of Prac. Med. Lond., 1834. Vol. 3. p. 657 et seq. Art. Scirrhus, by Dr. R. Carswell.) In the volume just referred to, Dr. Carswell seems to suppose that carcinoma is *primarily* formed in the *blood*, and that it is subsequently deposited in the molecular structures of organs in the manner in which nutrition is performed, or else, is secreted on the surfaces of membranes. (Op. cit. supra. p. 659 et seq.)

With respect to the seat of cancerous affections—Meckel thought that true scirrhus begins in the mucous or sebaceous follicles. Although this may be true to a great extent, yet there are numerous exceptions. They are explicitly stated to arise in the *heart*, by Cruveilhier, Ollivier, Bayle, and Andral; in the *veins* and *thoracic duct*, by Hodgson and Andral; in the *thyroid gland*, by Desault; and in the *brain*, by Bayle, Breschet, Andral, Travers, and Ollivier. (Fletcher. Op. cit. ante. p. 231.) Indeed, in M. Andral's Clinic, condensed by Spillan, it is stated that the learned professor has succeeded in collecting the records of forty-three cases of cancer of the brain. (Select. Med. Lib. Phil. 1838. p. 259.)

Before leaving the subject of the etiology and mode of generation of carcinomatous growths, we must notice briefly Dr. Hodgkin's historical sketch of the opinions broached concerning the origin of such affections, as contained in the 12th lecture, vol. 1, of his work on the Morbid Anatomy of the Serous and Mucous Membranes; as it will serve to complete the very imperfect outline which we have been able to draw from very restricted sources of information. Of course, we shall omit, in this review, whatever has already been noticed in the remarks which have preceded. Dr. Hodgkin observes that Hippocrates inferred—from the fact that women of a dejected and melancholy cast, and who labor under difficult menstruation, were very liable to cancer—that the cause of this malady was to be found in 'Atrabilis.' Galen, Celsus, Aretæus, and most of the ancients, were contented with developing his ideas, even down to the time of Lieutaud, whom we find supporting the same views. La Peroné, Petit, Quesnay, Pelletan, Soemmering, Le Dran, Vigaroux, Chopart, and Desault, have severally advocated various modifications of the theory which ascribes a lymphatic origin to cancer. Benjamin Bell and M. Pouteau regarded external violence as adequate to produce the disease. More recently in France, two classes of opinions have been held by some of her most celebrated pathologists. By the first, these adventitious structures are considered altogether new, and produced by a sort of *epigenesis*. Laennec and Beclard, as also John Hunter and Abernethy may be numbered among its advocates. According to the second class, the accidental tissues, are nothing more than transformations of the natural, or to adopt the phraseology of the sect, are mere *degenerations*. Dupuytren, Cruveilhier, and most of the disciples of Broussais, are among its adherents. Lobstein regards the malignant structure as the result of deviations from the normal process of nutrition, to which he applies the term *cacoplastic*. It is due to Dr. Hodgkin to state in this connection, that he has answered the objections of Professor Carswell to his views concerning the cystiform structure of cancer; and has brought forward several considerations which militate strongly against the opinions which the professor entertains with regard to the agency of the blood in the formation of such tumors. In truth, if the *blood* is the *primary* seat of these diseases, and if a *general* change in that fluid is *essential* to the production of them; it does not seem to be excessively clear, why the peccant humor should be manifested in one particular organ, whilst *healthy blood* is for a long time supplied to the rest of the system; or why, healing and cicatrization so often go on regularly and favorably when such tumors are removed by surgical operations. We can readily conceive that a connate or hereditary predisposition may exist in the system, which, under peculiar circumstances, may establish a remarkable proneness to a class of malignant diseases; and we can also imagine, that the structure of certain organs, or accidental peculiarities, may render one part more liable to them than others; and moreover, that their development may go on, after the manner of the natural processes of nutrition and secretion: but, if the malady is generated in the mass of circulating *blood*, it is not very easy to see how the *general* system remains so long uncontaminated, or how to reconcile this with the fact, that *when* such contamination *does* supervene, the patient usually sinks under its influence. We do not wish to be understood as maintaining that a primary *modification* of the blood *may* not be the cause of cancer; but that it is scarcely conceivable that carcinomatous matter should exist in that fluid *as carcinomatous matter*, without being deposited to an equal extent in every organ, or without vitiating the constitution to a degree incompatible with the long continuance of life.

In the 127th number of the Edinburgh Medical and Surgical Journal, for April, 1836, p. 500 et seq. we are furnished with an elaborate analysis of the work of J. L. C. Schroeder van der Kolk, from the pen of Dr. Craigie. The Dutch pathologist seems to accord with Dr. Hodgkin in some of his views. He coincides with Betschler in regarding each elementary tissue as having its own mode, not only of nutrition but also of morbid action and morbid growth. Thus, scirrhus and analogous structures are the result of perverted secretion or nutrition; and as these two functions are known to be greatly under the dominion of the *nervous system*, he is disposed to ascribe a *great agency to it*, in the production of such growths; not only as affording the most rational explanation of hereditary influences, but also, of the well-marked effects of mental emotions.

Of late, new light seems to have been thrown upon the subject of the elementary structure of cancer, by the microscopico-chemical researches of Professor Müller. He maintains that the positive characters of carcinoma do *not* display any thing *heterologous*, or foreign to healthy organization. It is in the interstices of healthy tissues that the elementary forms of carcinoma are first developed; in these interstices are found the germinal cells of cancer, a real *seminium morbi*. This is conspicuously illustrated, when the disease involves the muscular layer of the stomach. On examining fine sections of scirrhous mammæ with a compound microscope, M. Müller found that the formative globules consisted of transparent hollow cellules, from 0.00048 to 0.00108 or 0.00130 of an English inch in diameter. They were found to be insoluble in acetic acid, and also in water at any temperature. In many of these cells, nuclei or smaller vesicles could be seen, which were supposed to indicate that the formative globules were in the stage of progressive development.

We regret that our limits do not permit us to follow up the details of Professor Müller's recondite investigations. (Vide Rev. of M. Müller's work, in the Medico-Chir. Rev. for July, 1840, p. 119, et seq.) These ingenious views have commanded considerable attention among physiologists. Dr. Wm. B. Carpenter, in his Principles of Human Physiology, p. 68, (London, 1842,) in speaking of cancerous tumors, remarks that these growths may be traced to the fact, that they are composed of cells, which undergo little metamorphosis, and retain their reproductive power, so that from a single cell, as from that of a vegetable fungus, a large structure may spring up. At p. 458, he admits that Müller and others have shown that cancer consists of a mass of cells, like the vegetable fungi—that these parasitic masses possess an independent power of growth and reproduction—and that they are propagated by inoculation.

We must remark, however—with regard to the propagation of cancer by inoculation—that there has been considerable contrariety of opinion. MM. Alibert and Biett inoculated themselves with cancerous matter without the slightest effect. Dupuytren introduced portions of cancerous tumors into the stomachs of dogs, with like results. This last experiment, however, proves nothing, as many of the most virulent animal poisons—as for example, that of our common rattle-snake, (Crotalus horridus,) lose their active properties when submitted to the action of the stomach, (vide Good. Op. cit. ante, vol. 2, p. 82, 83; also, Cyc. Prac. Med. vol. 3, art. Scirrhus, p. 670.) M. Roux, also denies the specific virus of cancer, (Good. vol. 2, p. 83, note.) On the other hand, the experiments of M. Langenbeck, seem to prove that cancerous matter is transmissible to animals, by injecting it into their veins. In the case of a dog, the disease appeared in the lungs. (Am. Jour. of Med. Science, for Oct. 1841, p. 466.)

It is a circumstance somewhat remarkable, that M. Collard De Martigny had long ago been induced to adopt analogous views to those who maintain the cellular structure of cancer, from *chemical analysis*.

From an analysis of a gramme, (15.4441 grs. troy,) and 95 centigrammes, a centigramme = 0.15444 grs. troy,) of cancerous tissue sent to him by Prof. Cruveilhier, he found it to consist of :—

Albumen	0.206
Gelatine	0.021
Fatty matter	0.020
Phosphorus and salts	Trace.
Water	1.700
	1.947

This result, M. Martigny considered confirmatory of the opinion promulgated by him twelve years before, (1816,) that cancer was *hypertrophy* of the cellular membrane, (vide Monthly Jour. of Foreign Med., for Nov. 1828, p. 430.) According to Lobstein, on careful analysis, Dr. Hecht, jr., found 72 grains of scirrhus *breast* to contain :—

Albumen	2	grains.
Gelatine	20	"
Fibrin	20	"
Fluid fatty matter	10	"
Water	20	"
	72	"

In 70 grains of scirrhus *uterus* he found :—

Gelatine	15	grains.
Fibrin	10	"
Fatty matter	10	"
Water	35	"
	70	"

From which, it appears, that these tumors do not present any very constant chemical characters; or at least, that the preparations of the constituents is greatly modified by that of the organs in which they are located. (Cyc. Prac. Med. vol. 3, art. Scirrhus, p. 664.)

Very recently, we have observed that the indefatigable Müller has carried his investigations, concerning the microscopic characters of certain diseases, into the provinces of comparative pathology. In the Annals and Magazine of Natural History, No. 62, for Sept., 1842, (p. 61, et seq.,) it is stated, that at the Royal Academy of Berlin, March 3d, 1842, MM. Müller and Retzius had occasion to examine a darse, (*Gadus callarias*,) which was said to be not eatable from sickness. The disease was found in the natatory bladder, where there was a quantity of yellowish smeary matter, without smell. Under the microscope, it appeared peculiar—containing small bodies of from 0.00058 to 0.00068 of a line in length, which resemble in form the ribless *Navicula* or Agardh's *Frustulia coffeæ formis*. They consisted of two plates, united in the centre by a granular substance. These were formed in *cells*. From this circumstance, together with the want of silica in the plates, they are distinct from the *Naviculæ* and similar infusoria; they appear to belong—together with the *Psorospermia* of fishes—to a peculiar section of parasitical, vegetative organic forms of specific structure.

The authors have also instituted some inquiry into the development of *fungi* in the lungs and air-cells of birds. It is not the mould in the lungs of birds just dead—described by MM. C. Mayer, Jäger, Heusinger, Theile, and more recently by M. Deslongchamps—but flat fungus bodies, of a firm and uncommonly tough substance. M. Deslongchamps evidently had them before him—they formed the substratum of the mouldy filiments, which were developed in the lungs and air-cells of an asthmatic eider duck—but he was mistaken, when he considered the disease as an albuminous exudation. The first case examined, was an owl, *Stryx nyctea*, from Lapland, which became sick, short-breathed, and died, and was dissected by M. Retzius. The lungs and air-cells were covered with fungoid, flat, circular, whitish-yellow bodies, with concentric rings in the surface, from one to two lines in diameter. They were firmly attached, but could be removed without injuring the mucous membrane. In two places the air-cells were covered with confluent bodies, from one to one and a half lines in depth. The second case, was an old marsh harrier, *Falco rufus*, which was examined by M. Dubois. He found several white, cup-shaped, flat bodies in the air-cells. M. Müller had an opportunity of examining these enigmatical bodies with the microscope. They were clearly vegetable; MM. Link and Klotzsch at once pronounced them to be so.

Professor Müller thinks that the vegetable nature of the disease is beyond question; but that it is different from the mould filaments, as the mould is evidently an *Aspirgillus*. The translator, concludes by observing that these fungoid bodies, were over-looked by Mr, Owen in his examination of a specimen of the lungs of a flamingo, as also by Mr. Yarrell. Mr. Geo. Gulliver states, that he has clearly detected tubercular matter in the mucous membrane of the air-cells; but does not consider it decided, whether it is ever found in the cellular tissue outside the cells, (Phil. Mag. for Sept. 1842, p. 171.) It will be noticed that the seat of tubercle is identical with that of the fungoid bodies described by Professor Müller.

Perhaps, to many minds, these minute investigations may appear to savor strongly of German transcendentalism. That such researches may be *perverted* to subserve the purposes of the heedless ultraist, is quite axiomatic. Thus, we find a modern writer on, what he terms, "*Subjectivity of Disease*,"—after conducting the reader through an impenetrable cloud of verbose circumlocution, at last emerging from the mystical darkness, with the luminous aphorism, that, '*Death, therefore is life, or a progression towards it!*' (Vide London Lancet, vol. 1, 1841–42, pp. 118 and 254, et seq.) But such reasonings, if they can be so called, we regard as the *perversions* of science; not the legitimate results of minute observation and careful induction. Be this as it may, we should not forget, that nothing ought to be neglected, which affords the most remote possibility of throwing some useful light on this class of malignant diseases. If we are unable to arrest the destructive ravages of the malady when it has commenced; reason, philosophy and humanity, alike demand that we should endeavor to prevent its germination.

To do this with any hope of success, we should study the circumstances under which the incipient development takes place, and also the precise mode in which the early stages of growth are performed. By observing the operations of nature in the animal and vegetable kingdoms, we may draw many useful practical lessons, which may lead to results of the highest importance to humanity.

[To be continued.]

ON THE EXPLANATION OF THE DIFFERENCE IN SIZE OF THE MALE AND FEMALE URINARY BLADDER.

The fact that the urinary bladders of woman are considerably more capacious than those of men, has been observed by anatomists from the earliest ages. This was attempted to be explained by supposing that the conventional rules of society, together with the sedentary habits of females, rendered extraordinary distension of that viscus from protracted retention of urine, more frequent and extensive among them,—and thus the organ became enlarged mechanically.

This explanation appears to be exceedingly plausible. Indeed, it has found its way, as if by general consent, into almost all our standard works on anatomy and physiology.

It seems that no one has heretofore noticed the unquestionable fact, that the *same difference* in the size of the bladder, in favor of the *female*, obtains in many of the *inferior animals;* where, of course, this cause cannot be presumed to operate in the slightest degree. It most assuredly does exist in the hog, the sheep, and the cow. I have remarked it so often among these animals, as to be able to select out the bladders of the females from among a number of others of those of both sexes. In view of this established fact, therefore, the received explanation becomes at once untenable. We must, therefore, seek for a more rational explanation. Let us appeal to nature—let us see how she accommodates herself to circumstances. It is well known to every observant surgeon, that when the urethral passage is constricted from any cause, whether mechanical or the result of disease, the bladder very soon diminishes in capacity, and becomes contracted and thickened. This occurs when there is no disease of the bladder itself, and when that of the urethra has completely subsided, leaving nothing behind but a mechanical obstruction of the passage. Now, what is the deduction to be drawn from this natural process? The conclusion seems to be inevitable, that the *diminution of the capacity of the bladder*, under such circumstances, is an *expedient* of nature to meet the exigencies of a *contracted outlet.* Herein, I think, we are furnished with a clue to the *true explanation* of the difference of size of the male and female urinary bladder, when every thing is in a normal state. The female *urethra* is not only *larger* and more dilatable than that of the male, but is also shorter and straighter. It is generally of uniform diameter, varying from three to four lines, slightly curved, with the concavity looking upwards, and so extensible that calculi as large as walnuts have been known to pass. (Vide Lond. Lancet, 1841-'42, vol. 1st, p. 583; also vol. 2d, p. 41.) Now, as we have shown that the size of the *bladder* is in proportion to that of the urethra, it follows, *à priori*, that the male must have it smaller than the female; a process of reasoning which has the advantage of being equally applicable to many of the *inferior animals.* In this, nature has not departed from her ordinary hydrodynamical laws; the size of the *outlet* is proportional to the capacity of the *reservoir*, and *vice versa.* Perhaps, it may not be beyond the resources of the analytical mathematician to deduce the capacity of the bladder from a single measurement of the diameter of the urethra! At any rate, a *formula* might be easily obtained from hydraulics, which would give us us approximative values, not only of the size but also of the contractile force of the bladder!

It will be observed, that one of the conditions induced by a constricted state of the urethral passage, is a marked augmentation in the *thickness* of the coats of the bladder. I consulted Dr. Albau Goldsmith, so well known in the treatment of diseases of the genito-urinary apparatus, whose skill and long experience in these affections entitles his opinion to great consideration. He informs me, that he has had numerous opportunities of observing the changes which are wrought in the bladder by obstructions in the urethra. He finds that the organ diminishes in size, and that all the coats are affected, but particularly the *muscular*; the fibres growing fleshy and strong, are collected into bundles, giving the surface a fasciculated appearance. This strengthening of the coats of the bladder, seems to be another *device* of nature—in addition to the diminution of capacity—to increase the propulsive power, which is required to force the urine through a small outlet. In accordance with our preceding mode of reasoning, we should be led to expect that the urinary bladders of *male* animals should *also* possess a greater degree of *muscularity* than those of *females.* So far as recollection serves us, we think that such is actually the case in *nature;* and we venture to predict, that minute measurement and close inspection will demonstrate that the urinary bladders of *male* animals are both *thicker* and *more muscular* than those of the opposite sex.

Why the urinary bladders of the females of many animals,—and as a natural consequence, the urethra,—should be larger than those of the males, is a problem which admits of a far less satisfactory solution. The supposition most in accordance with design, is, that a greater quantity of *urine* is secreted in the female. This idea seems to be fortified by the anatomical characters of their system, in which the *fluids* appear to bear a greater proportion, and which predominance has been supposed to have some necessary connection with the functions of reproduction. But, of course, this question can only be settled by an appeal to experimental determinations of the relative amounts of urine secreted, under the same circumstances, by either sex. At any rate, be this last conjecture right or wrong, we trust that we have established beyond a reasonable doubt, that the disparity in the size of the organ in the sexes, is a n*atural* conformation, and *not* the result of mechanical distension.

JOHN LE CONTE, M. D.
Savannah, Ga.

Case of Rheumatic Iritis.

TO THE EDITOR OF THE LANCET.

DEAR SIR :—

Allow me to occupy a small portion of your valuable journal with the details of an interesting case of disease of the eye, which recently came under my charge. S. W—, æt. 44, applied January 6th, 1842, with rheumatic iritis of the right eye; the cornea was conical, the iris hazy, the crystalline capsule was covered by a layer of coagulable lymph, which in its organization had taken on the structure of net-work, this layer was attached to the pupillary margin of the iris along its whole circumference, and presented a dense and white appearance; the pupil itself was irregular and contracted; the iris had been pushed so far forward as nearly to obliterate the anterior chamber; the patient complained of a sense of fulness and occasionally of deep-seated pain in the eye. He has had this disease about his eyes occasionally for nearly fifteen years, and ten years ago he lost the left from the same disease. He had now no useful vision, could see objects moving when held close to the eye, but all were enveloped in a thick cloud. At the time of his application to me he was laboring under some symptoms of gastric disorder, but previous to that his health had always been good, excepting occasional attacks of rheumatism. I prescribed some alterative and laxative medicines, and ordered counter-irritants to the temples, neck and behind the right ear; I rubbed the ointment made of ung: hydr: ℥j.; ext: bellad: ʒij. into the brow, the fluid ext: bellad: was dropped into the eye several times a day in alternation with the comp: sal: of delphine, veratrine, and strychnine. I sometimes alternated the blue and belladonna ointment, with that of veratrine to the brow. At night fomentations were used. The vision has been progressively improving since the commencement of this plan of treatment, up to the present date; the patient can now see to read common newspaper print, and can recognise faces and ordinary objects when close to him; the dense pupillary membrane has become quite thin, and several perfectly transparent spots can be seen in it, these are gradually enlarging.

Very truly, yours,

R. K. Diossy.

207 *Broadway, N.Y., Oct. 25th,* 1842.

Drs. Manley and J. A. Smith, and the College of Physicians and Surgeons.

TO THE EDITOR OF THE LANCET.

Sir:—

It is two months since I published a pamphlet entitled 'An Exposition of the Conduct and Character of Dr. John Augustine Smith, President of the College of Physicians and Surgeons,' &c. &c. The subject was seriously treated; facts were stated; inferences obvious and legitimate were drawn; his own conduct as witnessed by a special audience was exhibited; his agency in packing, *pro re nata,* the boards of trustees, who were to do his business on several occasions; his agency in controlling the action of the Hon. the Regents of the University by special visits to Albany at the charge of the trustees, *with the intention of defeating their expressed will;* his cunning in suggesting to the board of regents the names of persons whom he wished to receive appointments as trustees, when vacancies occurred; his incompetency for the stations he occupies, both as a Professor of Physiology, and President of the College, whether arising from want of the requisite acquirement on the one hand, or want of moral on the other, were all displayed to the view of every man who could read, in a manner calculated to confound by surprise, if not to convince by their argument and fact; and yet to this present moment, nothing has been heard from the party thus publicly indicted, and the public are by some sidelong hints informed THAT HE WILL NOT PLEAD!! To all this I have nothing to object, provided, the allegations which the pamphlet contains are received by the profession and the public, in the language of chancery, *pro confesso.* It is true, that an abortive attempt was made by one of his associates to impugn the character of the pamphlet, which in place of being successful, recoiled with a tenfold force on the assailant; (vide New York Lancet, Nos. 10 and 11) but with this exception, nothing has been done, said, or contemplated in the shape of a reply to the serious charges thus publicly made. If in this world, abounding as it does, in imposture and impudence, there is any one spectacle which monopolises the merit of both; it is convicted vanity and impotence attempting to clothe themselves in the dignity of silence! to avoid the public exposure of a public trial; and although the fact may be received in mitigation of penalty, it is nevertheless conclusive evidence, that the contempt with which it is visited, is justly deserved. To see any individual holding a respectable station as a teacher arraigned before the public, and charged with conduct so offensive as only to be sufficiently punished by a public prosecution, is sufficiently humiliating; but to witness the same individual in failure of ability to justify or excuse himself, standing on his patent privilege—his official distinction—the presidency of an institution from which he has so long borrowed character, as well nigh to have exhausted the source of supply, refusing to answer through an affected fear of compromising his dignity, disarms even our charity of its sympathy, and prompts us to enquire whether such contempt for the public opinion can consist with soundness of intellect; or in other words, whether the party offending ought to be held accountable.

The medical profession seems now to be peculiarly sensitive on the subject of medical abuses, and calls loudly for reform of the manners and morals as well as mode of education of physicians, it is proper therefore to examine into the moral character, as well as the medical acquirement which possess a controlling influence in our medical schools; if the first be defective, no excess of the other will compensate the deficiency. I have made an exhibit no less calculated to provoke our surprise than to extort our commiseration. I have truly represented the President of the College of Physicians and Surgeons as using his influence to maintain himself in a station against the wishes of his associates, and the interests of the school; and for this purpose making no scruple to destroy the reputation of others better entitled than himself to any academic distinctions. I have, from the testimony of the board of professors of which he claims to be the chairman, convicted him of misrepresentation to the board of trustees of which he is the president. I have shown from the minutes of that board, that the malign influence which he exercised made them not only forget their own duty, but caused them to insult the applicant for redress; in a word, I have detected and exposed a selfishness of purpose and a recklessness of expedient as disgraceful to him as injurious to the college which he in fact governs; and to all this he refuses to plead, in the belief, perhaps, that his silence will be received by the public as evidence of his innocence. We have fallen on evil times indeed, when an exposition like this can create neither surprise nor disgust; when men claiming to belong to a highly honorable and moral profession can calmly read a statement of facts which, if submitted to a grand jury, would probably subject the principal to a criminal prosecution, although that principal is the acknowledged head of a medical institution. Is the profession so degraded in its own estimation, as to permit such conduct as I have exposed to pass without any expression of their contempt, or evidence of their reproof? if so, it is in vain that we spend our strength in attempts to reform or improve it; it were better to disband the whole fraternity, repeal all laws respecting it, and allow medical education to take care of itself. If men like Dr. John Augustine Smith, and his *concours* professors, '*qui nondum sine cortice natare possunt,* and who control the school, are to educate both in morals and in medicine the pupils who resort to it, they must 'better the instruction of their teachers,' if the character of the medical profession is to be bettered by them! proscription of men without justifiable cause, double dealing with each other, and a careless contempt of public opinion, all which are exhibited, in extenso, in the pamphlet, are hardly proper studies to qualify young men for the duties of an arduous, honorable, and strictly moral exercise of the duties of physicians and surgeons, and there is surely some danger of the influence of bad example, when by management it has proved successful. Whether Dr. Smith answers or not is of little consequence to any person except himself, but the medical profession have a right to expect that an exposition so serious and severe, written in the confidence of truth, will be met by some thing in the shape of apology or excuse, rather than by a dogged and sullen silence, which, if properly appreciated, fully confirms its statements.

James R. Manley.

New York, Oct. 26th, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, NOVEMBER 5, 1842. No. 19.

COMMUNICATIONS.

MEDICAL REFORM.

No. 2.

Life of a Medical Student—Lithotomy and Lithotrity—French Hospitals and Surgeons—Good Surgeons 'nascitur non fit.'

TO THE EDITOR OF THE LANCET.

SIR :—

But leaving this part of the subject for the present, let us go back to the fact that our young men find it essential to their success in life to finish their medical and surgical education abroad. Why should this be, when our means are so ample, and our suggestive faculties of so high an order? Why is it that improvement in medicine and surgery are followed up so tardily here? We must, in justice to Dr. Elliott, except the ophthalmic branch of surgery, for he seizes upon every new fact that promises to be of value to the art; and this is one cause of his distinguished success. The answer to all this is plain. Let us, however, give a long quotation from an eminent lecturer, at the close of which he naturally accounts for the fact that improvements are but slowly introduced.

Mr. G. T. Hayden, lecturer on anatomy and surgery, in Dublin, gives a very gloomy and abject view of the life of a student of medicine; but he is a *croaker*, and eaten up with megrim and gentlemanly melancholy. He has given a dark coloring to the foreground of his picture; and but for the fact that medical students increase instead of diminishing in number, we should infer that he had driven every medical student out of the Dublin colleges. He speaks of the *classical* part of education as being agreeable enough.

'It is true,' he observes, 'if even schooled for the profession, the preparatory course, the classic lore, the mind-expanding science, in short, the liberal education, are all ways of pleasantness; but these open upon the narrow passages to the dissecting-room, for *there* you are to lay the foundation of medical knowledge. Do not start, my young friend, at the sight of that pale and wan student cultivating anatomy; his hands besmeared with the blood and putrescence of the remains of decayed and disgusting humanity. You go next to a hospital; look at those foul and fœtid ulcers, which it is the duty of the student to dress. Behold the surgeon cutting through the abdominal walls, in order to divide a band which has caused incarceration, inflammation, and mortification of the intestines.

'But there is a portion of the dark side of the picture still undisclosed. You have viewed the student in the dissecting room, surrounded by objects loathsome in the extreme; you have followed him to the hospital, and have witnessed the heart-rending scenes there. Next you see him in the study, wasting his health over the midnight lamp, or undertaking his labors long before the sun has risen to dispel the darkness and gloom of night; [he makes even the refreshing and merciful shades of night darkness and gloom.] Lastly, you see him pale, wan and anxious, presenting himself as a candidate for a degree or diploma. The result of a close, scrutinizing, and searching examination, [whereabouts is this college? we never heard of such a one—Mr. Hayden must have been dreaming], proves that the student may undertake the arduous duties, &c.

'Hitherto his way has been rugged and rough—he has eaten his bread in the sweat of his brain, [!] as well as the sweat of his brow, notwithstanding the struggle has been a *triumphant* one, for it has been crowned with success.

'But, gentlemen, it is as lamentable as it is true, that envy, hatred, malice, and all uncharitableness, which exist to a deplorable extent in the world at large, appear to have taken up their abode amongst some of the members of the medical profession.

'Strange, you will say, that men who have obtained a liberal education, remarkable alike for talents and acquirements, should take such narrow, unchristian, and uncharitable views. If this had arisen solely from the arbitrary and unfounded distinction between physician and surgeon, that very distinction, although nominal, would still afford some grounds for difference and dispute. But far otherwise; the members of the same body, the several bodies themselves taken collectively, are influenced by jealousies, motives, and objects unworthy of a liberal profession, and calculated to depreciate and degrade the whole in public estimation.'

Now, Mr. Hayden, if any one not belonging to the profession had ventured to stigmatize the brotherhood in this sweeping style, you would doubtless have risen in your might to repel the slander; just like some parents who abuse their own children, but will not allow a stranger to take the liberty. You have said it, however, and you shall be taken at your word, because facts bear you out. No one can discourse for a length of time without hitting on some point on which every body will agree. But all you say of the students *wasting their health over the midnight lamp*, and of the *sweat of their brain*, and the *sweat of their brow*, is only a fancy sketch of the dark side. These happy young dogs, when the examination is near at hand, *do* sweat a little; not, however, with toil undergone, but through fear of rejection. I never heard of more than three or four who overtasked their brains, and even these would not have suffered had there been a sufficiency of physical stamina.

No, the life of the student of medicine is the very reverse of all this; it is a pleasant and desirable one compared to that of law and divinity, for there is an endless variety in it. Above all there is *action*, so necessary to the young, and a splendid array of curious facts. Then, after the first disgust is over, there is absolute fascination in the dissecting room. To be sure it is a difficult thing, a rare talent, to dissect well; but is not the state of that young man's feelings enviable, when he is acknowledged to be the best dissector in college? A man cannot dissect well without being a good anatomist, so here, in him, are united two of the principal requisites of a surgeon, and all the class know it too. Let not the student be deterred by Mr. Hayden's *dark views*, for if his education has been good, and if his morals are pure,—always including good health, which in a medical man is absolutely necessary,—he could not have chosen a pleasanter nor a more certain mode of preferment, and he *will* be preferred. But it must be added that a greater pest could never be let loose upon society than a young physician of slender talents and impure morals.

We do not object to the exposure which Mr. Hayden has made of *envy, hatred, and all uncharitableness*. If these vices have crept in the medical corps abroad, it is proper to speak fairly of it and without guise. Mr. Hayden tells us that the physicians and surgeons are devoured by jealousy. Is it not pretty much the case here too? A man who has been so fortunate as to bring home an improvement in medical treatment, or some discovery or improvement in surgery, is kept down by a cabal, a clique—not in so many words, but in a way as effectual as if a vote had been taken to depress him.

Let us look at the state of lithotrity, one of the greatest discoveries in modern surgery. Is it practiced extensively in this country, either in hospitals or private practice? No, it is not: and in consequence, men suffering under disease of stone are compelled to bear all the agony and torture, as well as all the danger of the 'high operation'—lithotomy. It was remarked the other day, that one of our eminent western surgeons, had performed the operation of lithotomy on upwards of one hundred and fifty patients in the course of his practice. It may be true that life was spared, for the *after treatment* was no doubt good; but what an amount of bodily and mental suffering all this was, and to think that it could have been avoided!

To be sure, it requires both skill and tact to break up the calculus; but if that is all, it is only in favor of the trial and of the surgeon who can operate. To cut a deep gash in the flesh, and grope through the wound for the stony substance, is an easy matter to the surgeon, and he prefers *this mode* of operating because *the other* requires talents which he does not possess, knowledge which he has not acquired, experience which he never had, and dexterity of manipulation which he does not possess. But is it not absolutely criminal in any physician to send his patient to a surgeon who resorts to the high operation—lithotomy, or the use of the knife? Ought any surgeon, however well skilled in this branch of art, perform this most painful operation, when one of his colleagues, or a member of the profession, is expert and successful in the other—lithotrity?

It has been said in reply, that lithotrity is not effectual, and sometimes not practicable in all cases; and that a large stone cannot be broken up. This is one of the strange anomalies which disfigure the profession;—this is one of those arts which is practiced by some of the mean and pitiful part of the brotherhood. In Paris, where the practice originated,—that is, where it originated so as to be available to the expert student,—it is successful in nineteen cases in twenty, and we feel assured that as instruments improve and prejudice and unworthy hindrance have ceased, a failure can rarely occur in skilful hands. How many men are now laboring under the disease of urinary calculus who might obtain immediate relief, without confinement to the house even, if this blessed art of lithotrity was known to them! How cruel in those who know this, and yet from jealousy refuse to make it known to their patients!

Our complaint, therefore, extends to the indifference shown towards all surgical and medical improvements, unless the happy operator belong to a particular clique. This calls for a reform, for we should at least give encouragement to the man who invents or adopts an improvement, whether he belongs to the profession or not. Let the medical corps beware, for while every thing goes ahead they may depend upon it that medicine and surgery will not be left behind; it is only the illiberal of the profession who will find themselves in the background.

Why cannot there be a beginning to produce a better state of things? We prophecy that if a practicable effort at reform come fairly before the public, we should in a short time get institutions of so high an order and character, that young men would not be compelled to leave their own country to seek for that knowledge—that novelty of knowledge, which our impoverished policy denies them at home. We should find that our schools of charity would be resorted to by the young men of other nations, and that in our turn we should be looked up to as models, as we now look to France and England.

In hospitals and infirmaries, the men who are to preside over them should be well chosen, and they should exact the lawful attendance of every officer connected with the establishment. They should break up a most pernicious practice—fatal in most instances, and now fast creeping in our hospital policy, that of withdrawing from the patient after the operation is over—abandoning him to an assistant!

One reason why there is such wanton destruction of life in the French hospitals, is the neglect, or abandonment of a patient after an operation is over. A surgeon takes out a tumor or a fungus, weighing seven or eight pounds, and from vital parts. Nothing, perhaps, could equal the skill and expertness with which it was performed, and as it was done in a few minutes there is every reason to hope for the recovery of the sufferer; and so he would if the surgeon considered it as part of his duty to attend to him afterwards. But he does not, nor is there a physician at hand of equal eminence with himself to take charge of this extensive wound and this poor shattered nervous body. No wonder, therefore, that death steps in and takes the matter in his own hands.

France is certainly a good school for the purpose of learning the art of removing tumors, and for amputations and trephining. Skill and dexterity are there seen in perfection, but if with this knowledge our young men are to have their feelings blunted, their sense of duty destroyed, and their estimation of the value of life lessened, they had better remain at home. *It is to save life* that a patient submits to a frightful operation, and not to show off the expertness of a surgeon. Of what consequence is it to him that a man does the job well or ill, if the object has not been obtained? Let us ask this question, if a surgeon were to perform an operation on a king, would he abandon his patient to the house-dresser of an hospital? Would he not make minute inquiries and be present at the dressings, to witness the progress of cure? A single visit opportunely made, would probably save life. Would he neglect the king or wealthy nabob? No, he would not. And pray what difference between the king and the beggar does God acknowledge?

As was said before, if he have not time to attend to the saving of a man's life, give him more time. No one *now*, having common sense, will doubt that greater skill and care is required after the operation is over; for the truth is, that though to operate well requires great talents, yet these talents are not of the highest order. It is not alone a great merit to operate well, but to know whether an operation is necessary; many is the arm and leg that has been taken off in an hospital that might have been spared!

But if it be really as well that the surgeon should only be the operator, and be excused from all further attendance, then let a surgeon of equal skill be appointed to take up the case and carry the man through; for it requires more skill to prevent hæmorrhage, and to keep down undue excitement, than to operate in the first instance. Is a *young* man fit for an office of this kind?

Are patients taken in at our hospitals for the mere purpose of experiment? Are they to be cut up and then thrown aside for interment, that the surgeon may show the class how a rich man is to be cured? It is painful to allow the destruction of animals for this purpose, but to that we must submit, for *their* life was given that ours might exist. A man who has a soul to be saved—a man who can support a family when his body is free from disease—is to be dealt with tenderly and honestly, not treacherously and negligently. We are to lengthen his days and not shorten them. Let it be kept in mind that *neglect* in hospitals is one of the phases of downright murder.

Let us hear what Dr. Harlan says of the French surgeons:—

> 'M. Roux possesses a grave, earnest, and decided character, but like most others of his profession, he is overfond of displaying his manual dexterity. I have heard him beseech a patient to submit to an operation, as if it were the greatest favor conferred upon the operator; the operation once performed, the patient is pretty much consigned to his fate, for the after treatment of French surgeons I consider little better than no treatment at all. The constitutional demands, the habits, the diathesis, or idiosyncracies of the patient, are almost universally and entirely overlooked; and hence, with the foul air of the hospitals, the dreadful mortality of these pest houses On the very first coup d'œil of the wards of these hospitals, nothing but disastrous consequences could be anticipated from one hundred to one hundred and fifty sufferers crowded together, side by side, and exhaling each noxious effluvium peculiar to the gorgon form of diseases which inflict the inhabitants of rooms constructed on the worst possible principles for the purposes intended. In which ventilation was not thought of, and where classification of disease has never been attempted.
>
> 'M. Roux is on the most familiar terms with his patients. In going his daily rounds, from 7 to 9 A. M., he has always something funny, encouraging, or coaxing to say to them all. For one, he has a poke in the ribs with his finger; for another, a box on the ear, &c. I have seen him make a convalescent reel with a blow on the cheek, for asking him for something good to eat—all in the best possible humor. He sometimes becomes very affectionate, and kisses a patient on whom he has inflicted a severe operation; and this salute, the students say, always prognosticates the death of the sufferer.'

If any of our readers thought that the character of la petit André in Quintin Durward was an exaggeration, let him read the above, and it will be suspected that M. Roux must have sat to Sir Walter Scott for the portrait. At any rate, if Roux did not what shall we think of M. Magendie?

> 'His spring course of experimental physiology commenced in the beginning of April. I seldom fail in assisting at his murders. At his first lecture, a basketful of live rabbits, a glass receiver full of frogs, two pigeons, an owl, several tortoises and a pup, were the victims to lay down their lives for the good of science. M. Magendie has not only lost all feeling for the victims that he tortures, but he really likes the business. When the animal squeaks a little the operator grins; when loud screams are uttered, he sometimes laughs outright. He has a most mild, gentle, and amiable expression of countenance, and is in the habit of smoothing, fondling, and patting his victim whilst occupied with preliminary remarks.'

Which of the two worthies sat for the picture of petit André? But where is Trois Eschellé among the hospital surgeons, for the drawing would not be complete without him, and where is Oliver, with his stealthy pace and his demure look? But here is M. Velpeau, as shown up by Dr. Harlan:—

> 'M. Velpeau has been most unfortunate in the loss of patients in La Charité, in which hospital the mortality has been greater than in any other establishment. In addition to the usual causes which have gained for this hospital so mortifying a distinction, there has prevailed during the last winter and present spring an erysipelatous diathesis which has desolated its wards, so that the puncture of a nail, the simple operation of extirpating a small ganglion from the neck of a healthy subject, &c., have terminated fatally in numerous cases, and yet M. Velpeau continued his operations, and appeared astonished himself at his want of success, and is far from taking advantage of the best means of averting the evil; his constitutional treatment is worse than nothing. A patient was admitted with a wound in the heel by a nail. Erysipelatous inflammation followed, and was continued to the ankle joint, producing suppuration, irritation, and death! No measure was resorted to in order to rally the powers of a broken constitution; and in the autopsy and lecture on this subject, M.

Velpeau expressed his inability to explain his want of success in the treatment of this case, and viewed the death of the patient, from the simple puncture of a nail, as an opprobrium to surgery! But human life, it is said, is of very little account with French surgeons. M. Velpeau operated five times successively for disarticulation of the knee, *and in every case the patient died!*

'But M. Velpeau is a most dexterous and fearless operator, and if his hospital were more fortunately constituted, would doubtless be more successful. I have seen him twice remove humors involving large portions of the lower jaw with complete success; but he frequently operates needlessly and recklessly. He is more anxious to display his dexterity than to save his patient.

'In case of an old man with fistula, an incident occurred which showed his fondness for cutting. After the ordinary section, the surgeon amused himself in trimming the cut edges of the wound very deliberately, when all at once a large projecting mole on the back of his patient caught his eye. It was a tempting bait. He immediately transferred his scissors to it, and incised it at its base, very much to the discomfiture of the patient and the merriment of the class; one of whom remarked that M. Velpeau cultivated a patient's acquaintance very much like the gardener cultivated his plants, by lopping off all offensive parts and useless incumbrances.'

Really this is intolerable. M. Velpeau ought to have been expelled from the hospital for his brutal impertinence. Would he have dared to do this if his patient had been the King of France, instead of one of his poor subjects? And his class laughed too! Heaven defend us from sending our young men to such sinks of brutality and vulgarity. If the hospital patients are always objects of pity, they should be pitied *tenfold* if they are compelled to seek relief from the tender mercies of these Merry Andrew operators. Does not all this look as if a reform were necessary in the houses of charity?

But whilst we so strenuously advocate the interests of the sick poor, let us not forget to urge the students of medicine to exert themselves a little more, so as to obviate the necessity of going abroad? Industry and ingenuity will stand in the place of foreign instruction, and will suggest improvements even of greater importance than those obtained in Europe. Dr. Harlan, whom we shall once more quote, thinks that even *now* we are not so much inferior to the French surgeons in operative surgery; certainly not so much inferior as to warrant a young man in incurring the risk and expense of a two years' residence abroad.

'Parisian hospitals and French surgery,' Dr. Harlan says, 'might be presumed, *a priori*, to be the first object of attraction to a practical surgeon; but I cannot help confessing that a large acquaintance with them, a more extended course of investigation, and a more familiar intercourse with their most eminent teachers of surgery, have in no small degree, lessened the admiration with which I once viewed the eclat generally attributed both to the men and the institutions. It is true, we cannot too much admire the long continued and laborious application by which they have attained perfection as anatomists, and the consequent manual dexterity in operations so universally admitted as a distinguishing characteristic of French surgeons—and here their dexterity ends. Not only so, *this dexterity itself has been obtained at the expense of principle, and at the expense of life.* Thousands are annually consigned to a premature grave, by operations not always necessary to be performed at all, or improperly timed, or performed in cases that must terminate fatally, with or without operations. The mortality occurring at the Hôtel Dieu, perhaps one of the best hospitals, is absolutely frightful, in amputations alone. The surgeons admit a loss of *ninety-five per cent.*; and one of the *Internes* admitted that during his residence for one year at the Hôtel Dieu, not one case of recovery occurred after amputation.'

Now if this be really the condition of surgery in the French hospitals, it is folly in our young men to waste their time and injure their morals by going there. It appears absolutely like going to South America to see the *bull-fights* for the purpose of learning the art of killing scientifically, for exquisite skill is displayed by the poor misguided gladiators, as they may be called, when forced into the arenas. It is not half so revolting and demoralizing, to see a dumb animal butchered scientifically in open combat, when he has a chance of retaliating and killing his adversary. It is to witness the deliberate destruction of life by scientific men in these French institutions, that young men go to France; for, according to Dr. Harlan, it amounts to nothing more. There is not a great deal of cutting and slashing in *our* hospitals, but it really would be worth while for the public to examine the reports—meagre as they are—and ascertain whether there are ninety-five per cent. of butchery done there too.

What makes it the more shocking and mysterious is the fact that a man loses his life in the French hospitals by the mere prick of a nail—not by lock-jaw, which is sometimes the case, and beyond the skill of the physician, but by erysipelatous inflammation;—and M. Velpeau to call this case an opprobrium to surgery! If he had taken all the disgrace to himself, he would have spoken truth. What did Dr. Harlan understand when the Interne said that not one case of recovery occurred after amputation in the twelvemonth he was in the hospital? Were the amputations merely of legs and arms—simple amputations such as these? Monstrous! not one recovery in a twelvemonth, and there must have been two or three hundred cases. It is to be presumed that this fatal result does not take place in private practice. Why cobbled off as legs and arms are in the back settlements, there is rarely a death. It appears to us as near like murder as possible, and of the most wanton kind, to suffer a man to die after the simple operation of trephining or amputation. Even in the Austrian prisons there was more attention paid to the sufferers, horrible as was their treatment. Maroncelli, he who was incarcerated with Silvio Pellico, escaped death, though his leg, diseased by white swelling, was bungled off by the common barber. He recovered and is now a healthy man, living in New York, and he owes his life to the after treatment of his wounded limb. If he had been operated upon in one of the French hospitals, his life would have paid the forfeit.

But Dr. Harlan is mistaken in one point—long continued and laborious application does not insure manual dexterity in operative surgery. The dexterity need not be obtained at the expense of principle and life. Certain men may go on to cut and slash for ever without obtaining that expertness which gains admiration and ensures success; and

Dr. Harlan proves to us that there is a want of success which cannot altogether be attributed to neglect of after treatment. Dr. Physick was an expert, dexterous, and skilful operator, so is Dr. Valentine Mott, so is Dr. Alban Goldsmith; yet none of these great surgeons, as we all know, acquired their expertness of manipulation by the compromise of moral principles, or any unrighteous, unnecessary expenditure of life. They did not acquire their reputation in operative surgery by a long continued and laborious application of the knife on poor hospital patients or animals. If all the patients on whom they operated had died, would they have stood foremost in the ranks of surgery, as they now do.

The fact is, that dexterity and expertness in manipulation, are gifts *born* with us. Physical and mental organization have much to do with the surgeon's success; and no long continued practice is necessary. If any people could excel in manual dexterity, it would be the Americans, who have suggestive faculties of the highest order, and could 'make their heads play into their hands.' But our young students could not take advantage of this double gift, even should they possess them, for the price of subjects is so high as to prevent them from experiments to test their dexterity; and the post-mortem examinations are too few to be of much service. Q. E. D.

PUBLIC HYGIENE.

No. I.

TO THE EDITOR OF THE LANCET.

Mr. Editor :—

I beg to call the attention of your readers to the following notice of a trial for nuisance in our city, as published in the Commercial Advertiser, of the 22d ult. Owing to the very rapid advancement of chemistry, especially as connected with the arts, and the useful purposes of life, it is the study of medical men to investigate carefully the effects which many of these processes have upon the public health, in order to decide the question whether they ought to be allowed, in cities or villages densely populated.

General Sessions, Oct. 21.

Before the Recorder and Judge Lynch—M. J. Bacon, Esq., acting as District Attorney.

Trial for Creating a Nuisance.—Charles S. Holt was put upon his trial for creating a nuisance, at No. 58 Downing street, which he occupied for 'boiling spoiled, stinking, and rotten meats, and that the same is exceedingly offensive and annoying.'

For the prosecution, a great many witnesses who live in the neighborhood of this building, which extends through to Hammersley street, testified that they were in the habit of boiling down stinking hams and other meats at this establishment, and these emitted a highly offensive and intolerable stench, which in some instances had caused sickness in their families, and several of the witnesses said if it was allowed to be continued they would be obliged to abandon the residences they now occupy. It was also testified that the smell was much more offensive than that emitted from the gas houses, and some of the witnesses said they would not reside in the houses opposite rent free. In warm weather neighbors are obliged to keep their windows closed to exclude the stench.

For the defence, it was contended that it was not a common nuisance, and therefore the defendant could not be called upon to answer in a criminal court; also that the place was not more of a nuisance than numerous other establishments in more condensely populated parts of the city. There was nothing used in the building but salt pork, from which lard was manufactured, candles, soap, oil, &c., and the refuse from it was entirely inodorous.

Dr. Chilton was called for the defence, and testified that he had visited the establishment at the invitation of Mr. Holt. There was no more effluvia arising from the boiling of the meat in the establishment than from the boiling of ham. When the meat is tainted, the odor would at first be offensive, but soon pass away, and then the smell was only that ordinarily arising from boiling salt meat. He did not consider it unhealthy, or that it would produce sickness. He thought that the refuse saline matter that ran down the gutters was beneficial rather than otherwise.

Dr. Goldsmith testified that even the boiling of tainted animal matter, or the smell from animal matter in a state of decomposition, would not produce disease, although it might create nausea.

The proprietors of two provision stores testified that Mr. Holt had purchased from them several thousand barrels of pork, which was of the same description as is used for southern exportation, and sold for consumption by most of the cheap groceries in the city.

Several workmen employed in the establishment, who have heretofore worked in packing houses, testified there was nothing used but good pork in the establishment, and that it was not more disagreeable than the pork inspection warehouses, the several packing houses, &c., in the city.

The Recorder charged the jury at some length on the law in relation to common and private nuisances, and said that it was for them to decide whether the establishment was a nuisance or not, but that it was immaterial whether the meat used in the establishment was sound or not, if they were satisfied the effluvia arising therefrom was a nuisance.

The jury rendered a verdict of guilty; sentence was suspended until the next term, and the Court suggested that Mr. Holt should abate the nuisance, which he said he was desirous of doing.

Remarks.—As the establishment above described is located in the part of the city where I reside, I have had perhaps a better opportunity of forming a correct opinion as to the effects produced by it, than either of the witnesses whose testimony was offered. I hesitate not, then, to declare, that within my knowledge, more than twenty cases of putrid typhus fever, of a highly congestive and dangerous character, have occurred in its vicinity during the past summer, which could be traced to the effluvia emanating from it, as their exciting cause. Besides these, there have been numerous cases of slighter illness in the neighborhood, attributed, and I have no doubt justly so, to the same offensive effluvia. I have myself attended four cases of congestive typhus in one family, in the vicinity, which, I had no doubt at the time, nor now, originated from the same cause. These cases were, in many respects, different from ordinary cases of continued or bilious fever, and were regarded as possessing a very marked and peculiar type, by several physicians who saw them. The first symptoms were, want of appetite, great muscular debility, dejection of spirits, lassitude, pain in the back and head, bones, &c. Tongue moist and white, red at tip and edges, great tenderness at the epigastrium, fulness of abdomen; mucous surface of the stomach and bowels extremely irritable, and easily acted upon by medicines; discharges generally serous, and highly bilious; the temperature of the surface often below the natural standard, except the head, which was, for the most part, preternaturally hot, showing determination of blood to the brain. The mind was wandering and incoherent the greater part of the sickness. The debility was very great, and emaciation rapid. Pulse feeble, and ranged from 110 to 125. In one of the patients, a female of 16, during the first ten days of her illness, the pulse was so frequent and feeble, that it could not be counted—nothing but a slight vibration being perceptible over the radial artery. There were present, also, great thirst, and wakefulness; the eyes were congested and blood-shot, pupil dilated, with a sleepy, stupid, drunken expression of countenance. These cases were about four weeks under treatment, and convalescence was extremely slow. The indications were to relieve the local congestions, especially of the head, liver, and gastro-enteritic mucous membrane, and to support the strength. Under this treatment, modified as circumstances seemed to require, they have all eventually recovered. Several other cases, however, of a similar character, which occurred in the neighborhood, proved fatal.

Now, if it be asked, how do I know that these cases of fever owed their origin to the effluvia given off from the putrid pork boiled at this establishment, I reply, that there is no other cause in the vicinity adequate to produce such a disease. Nausea and vomiting, accompanied by great debility and prostration, were very often produced by inhaling the offensive gas, among the inhabitants residing in the immediate neighborhood; and we can easily imagine that a repetition and persistence of the same noxious influence, might cause a fever of peculiar type. So convinced were the neighbors, of this being a cause of disease, that several of them, after a long and fruitless attempt to get the establishment abated as a nuisance, closed their houses and moved away. Every physician who saw these cases, coincided in the opinion that they were caused by putrid animal effluvia.

But, then, there is the opinion of Drs. Chilton and Goldsmith, both of whom testified 'that the effluvia, or smell from putrid animal matter, will not produce disease, nor can be considered as unhealthy.' Dr. Chilton was very positive on this point, and thought there was no difference in this respect, between the effluvia given off by boiling putrid or fresh meat. In opposition to this opinion, I beg to submit a few positive facts, before which negative evidence like this must unquestionably yield.

Dr. Copeland remarks (Dict. Phar. Med. p. 127), that '*molecules of animal matter in a state of decay, are frequently productive of disease*, both in persons whose avocations expose them frequently to this cause, and in those who approach it incidentally.'

Dr. Caldwell (Malaria, p. 69) remarks:—'If I am not mistaken, I have seen yellow fever produced in a city, by putrid oysters, fish, and hides. Whether the same would be produced on a field of battle, in the free and open air of the country, some may deem doubtful. Many reports, however, not unworthy of credit, are strong and positive in affirmation to that effect. Were I to hazard an opinion on the subject, it would be, that wherever found, large masses of animal matter, in high putrefaction, may generate a poison productive of fever. That such is the case in the semi-stagnant atmospheres of cities, does not, I think, admit of a doubt. Had I leisure to dwell on the subject, it would be easy to show, that the immense exhumations of dead bodies in Dunkirk and Paris, with other analogous facts related by Dr. Bancroft, furnish no evidence subversive of this belief. But I am not persuaded that the poison is the same with that of common bilious fever. Facts seem to justify a contrary belief. The latter being chiefly of vegetable and the former exclusively of animal origin, they can scarcely be identical. *The diseases*, however, which they produce, differ not a little in type and character. Fevers resulting from an animal miasm are more continued in their form; those from a vegetable one, less so.' 'In 1799,' says the same writer, 'the yellow fever in Philadelphia, was satisfactorily traced to a few cargoes of damaged and highly offensive hides. In 1803, the disease made its appearance about the same time, in three distinct places, remote from each other. In each place was a large quantity of unsound oysters, to which it was attributed. Their condition rendered them, on account of their fetor, a serious nuisance to the neighborhoods in which they lay, and nothing similar existed at the time in any other part of the city. In 1805 the fever was again traced to an immense pile of putrid oysters, in the District of Southwark. The stench alone, that issued from this mass of putridity, produced in many persons, on approaching it, immediate sickness, by its intolerable offensiveness. The same was true of the putrid hides in 1799. I witnessed once in the city of Philadelphia, several cases of yellow fever, which seemed fairly referable to a mass of putrid fish.' Dr. C. in pursuing this subject, remarks that 'some pathologists deny not only the production of malignant fever, but the practicability of its being produced by the decomposition of masses of animal matter. To sustain this opinion, they adduce instances in which such nuisances did not promote fever. Hence their inference that it cannot do it. To sound etiologists it is scarcely necessary to observe, that this form of reasoning is not only inconclusive, but exceedingly hazardous. Its character is negative. It virtually contends that because an event has not occurred under one set of circumstances, it cannot occur under another; that because it has not been produced at one or two particular times, it cannot be produced at all. But it should never be forgotten, that in different states of the atmosphere the results of putrefaction are equally different. It is scarcely necessary to add, that one positive fact overbalances a thousand such negatives.' (*Transyl. Jour. Med.* vol. 3, p. 485.)

Among the exciting causes of fever, Dr. Copeland enumerates 'the effluvia arising from putrid, or decaying animal matter, particularly when concentrated, or mixed with the emanations from the decomposed vegetable matters.'

(It may here be remarked, that in damp weather, the effluvia from Mr. H.'s establishment, could be perceived at a distance of more than half a mile, if the wind was favorable. Within a circuit of fifty rods in diameter, if the atmosphere was still, dwellings were scarcely habitable unless the windows and doors were kept closed.)

A few additional facts from a large number, which might be given, must suffice.

Vicq D'Azyr states that, on the authority of Maret, a celebrated physician of Dijon, in France, two persons who died of influenza at Sanlieu, in Burgundy, were buried beside each other, in graves dug under the pavement of the parish church of St. Saturnine, within an interval of twenty-three days. It appears that the coffin of the first, a very large subject, accidentally broke, and a quantity of putrid fluid was effused, which in an instant, filled the whole building with a stench intolerable to the bye-standers; out of 170 of these, no less than 140 were seized with a putrid malignant fever, which took the symptoms of the prevailing influenza, differing only in intensity and fatality, which was evidently caused by this temporary diffusion of impure air.' The same author relates a similar fact, which occurred on the 17th of August, 1744, in the parish of Notre Dame in Montpelier, terminating in the speedy death of four individuals and the sickness of several others. Diodorus speaks of pestilences produced by the putrefaction of animal substances; and we read in St. Augustin of an extensive plague, having been caused by the decay of a large number of animals, which had been cast upon the shore. A similar fact is related by Foresters and John Wolf. We have accounts in different writers, worthy of entire credit, that epidemic diseases, and especially putrid fevers, occurred in Ethiopia and other countries, by the swarms of dead locusts which are drowned and washed upon the shore. After the victory of Arbela, Aristottle advised Alexander to move on speedily to avoid the pestilential influence of the dead. Diemerbroech (de Pest. L. 1, c. 8) remarks that 'those on the sea coast suffer much from the putrefaction of whales thrown upon the beach.' Paré tells us that in his time, a circumstance of this nature produced an epidemic plague in Tuscany. Lucan speaks of the ravages of an epidemic in the army of Pompey, near Durazzo, caused by the carcases of horses killed and left upon the field; and Ammianus Marcellinus relates that the camp of Constantine the Great was desolated in consequence of the same imprudence. Paré states that in 1562, a pestilential fever spread for a circumference of three leagues around Guienne, caused by the putrid exhalations of a pit filled with dead bodies two months before. It would be very easy to multiply examples of this kind, and especially instances, where in cities, overthrown by violent earthquakes, destroying many inhabitants, malignant fevers have almost immediately followed, destroying many of the survivors; and these fevers have universally been attributed to the decomposition of the dead bodies. Londe, in his excellent work on Hygiene, remarks that 'Dr. Chambon was obliged to make an anatomical demonstration of the liver and its appendages, for a license, before the Faculty of Medicine of Paris. The decomposition of the body, which served for the demonstration, was very far advanced, which Chambon remarked; but the obstinate dean insisted he should use the subject, notwithstanding his representations and those of his colleagues. Corion, one of the four candidates, struck by the putrid exhalations which escaped, fell into a state of syncope, and died within thirty-six hours. A second, the celebrated Fourcroy, was attacked with a violent cutaneous eruption, of an exanthematous character; and the two others, Laquerenne and Dufresnoy, remained in a languishing condition for a very long time; the last, indeed, never recovered. Chambon escaped with an attack of fever, followed by copious perspiration.' Londe attributes his escape to anger, or mental excitement produced by the refusal of the dean to change the putrid subject for a fresh one.' (Vol. 2, p. 348.)

Finally, when we consider that the ultimate elements of animal and vegetable bodies are the same, and that during their decomposition the same or similar products result, viz. *carbonous*, *carbonic acid*, *ammoniacal*, *sulphuretted*, *phosphuretted*, *hydrogenous gases*, with other compounds with which we are not so well acquainted, but which we have reason to believe are highly poisonous, it would seem that it were scarcely possible to doubt that the exhalations in question must exert a deleterious influence upon the public health.

It may be here remarked, that the sanatory regulations of cities, especially in relation to public cemeteries and interments, are founded on the conviction of the pernicious tendencies of putrid animal exhalations, and the salutary influence of these measures has been fully established by experience, and is now acknowledged throughout the cities of Europe as well as this country. Dr. Chapman admits that 'such effluvia, when concentrated and abundant, greatly disturb the alimentary canal, probably through the medium of the olfactory nerves, or by being entangled and swallowed with the saliva, inducing nausea, vomiting, and purging, with giddiness, &c.' (*Phil. Jour. of Med.*, vol. ix., p. 376.) Whether such a condition is compatible with perfect health, I leave for the reader to determine. And yet, while Dr. Chilton admitted that such effects might follow the inhalation of putrid animal exhalations, he yet insisted that they were perfectly salutary and innocent! *I* should be gratified to know the reasons for such an opinion.

Admitting, for the sake of argument, that the exhalations from slaughter-houses, candle, soap, glue, and leather manufactories, are not manifestly injurious to the health of workmen employed in and about them, it does not by any means follow, that the exhalations given off by boiling immense quantities of putrid, salted meat, are of the same character and equally harmless. In the one case, the exhalations are given off slowly, and are immediately carried off by currents of air, rarely, if ever, becoming so concentrated as to offend the digestive organs; whereas, in the other, volumes of putrid gases are evolved by heat, loading the atmosphere with their humid stench, alike offensive to the senses of taste and smell, and seriously disturbing all the functions of the body. I speak here of what I have myself, again and again witnessed, and in few instances, experienced. Where the decaying and rotten meat is placed in tubs or cauldrons, and the oil extracted, by passing steam through them, as has been practised of late, the exhalations are still more perceptible and offensive, as being mixed with vapor, they now settle down near the surface of the earth, instead of ascending into the atmosphere. The same result takes place, however, whenever the air is loaded with vapor, whether steam be employed or not.

Although, Mr. Editor, I have been compelled to question the correctness of the opinions of the medical gentlemen, who were witnesses on this trial, I can, at the same time, cheerfully bear testimony to their high attainments, and their zeal in the cause of medical science. M. D.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, November 5, 1842.

An extraordinary movement has just taken place with regard to the management of the New York City Hospital. Among the abuses connected with the past government of that institution, the systematic exclusion of every thing like public supervision of the conduct of its medical officers, has not been the least glaring and lamentable. The injury thus inflicted on the interests of the poor patients—of medical and surgical science—of the students—and of the medical attendants themselves, may be readily imagined. We were ourselves favored with a specimen of this sagacious management, about the time when we established this journal. We were anxious to make arrangements for procuring reports of cases and operations at the Hospital for publication in the *Lancet*. Finding that it was quite impossible to obtain any information with regard to the cases under treatment, in the the way we had been accustomed to receive it in European hospitals, no clinical lectures being delivered, we determined to make an effort to procure an occasional inspection of the case-book, and visited the 'House-Surgeon's' office, for the purpose of obtaining permission to do so. There we saw three or four lads, amongst whom, on our inquiry for the 'House-Surgeon,' a very spirited discussion took place, as to which of them possessed the right to that appellation. This important point having been settled, and our request for permission to extract interesting reports from the case-book, having been made, one of the young gentlemen informed us that no such permission had ever been allowed, 'but,' added he, with an amusing air of juvenile pomposity—'We will take the matter into consideration!' Our impression at the time, was that there were no such things as regular 'case-books' kept in the institution.

However, it seems that the medical officers of this Hospital have at last resolved on an alteration in their tactics. A 'change has come o'er the spirit of their dream,' and they have resolved to throw open their doors to the profession, and to invite, instead of preventing, public inspection and candid criticism. We rejoice at such a movement. It must produce most salutary results. The patients will be better treated—the medical attendants will be essentially benefited—the interests of science and of the students will be materially promoted.

The first intimation of this desirable reformation, was given in a neatly printed circular, which was sent by the United States City Dispatch Post to quite a considerable number of physicians, and of which the following is an accurate copy:—

'The Governors of the New York Hospital having pro 'vided a New Operating Theatre, for the better accom- 'modation of the Members of the Profession and Medical 'Students, you are invited to be present on Saturday, 29th 'inst., at 12, M., when an operation for Anchylosis of the 'Elbow-Joint, will be performed.

'Ocotober 27, 1842.'

This circular is something of a curiosity in its way, but we resist at present the temptation to dissect it, and merely express our regret that any necessity was felt to compile a select list of physicians, to whom only it was deemed proper that it should be sent, several medical gentlemen, neither very ignorant nor little known, having been thus uncourteously overlooked. However, at the time and place specified in the circular, a large number of practitioners and students were in attendance.

Not having ourselves received notice of the opening of the 'new operating theatre,' we were not present on the occasion. Most fortunately, however, we have been favored with a very spirited report of the whole proceedings, which was handed to us by our esteemed friend Dr. Forry, with the request that it should be inserted in an *editorial* article. This report, Dr. Forry stated, was prepared by a friend of his, who stood high in our estimation. On examining the manuscript, we had no difficulty in recognizing the 'fine Roman hand' to which we had been previously and frequently indebted for many valuable and piquant communications. Indeed, we may now embrace the opportunity of expressing our great obligations to Drs. C. A. Lee, Middleton Goldsmith, and others, for much valuable information respecting medical affairs in this city, and judicious advice relative to our supervision of them.

The brief period of our residence in this city, and our utter inexperience of the interesting *peculiarities* which distinguish the state of the profession here, rendered such friendly co-operation extremely acceptable, and we trust that we have displayed our gratitude by a faithful and diligent use of the assistance thus freely and cordially extended. We, therefore, gladly availed ourselves of Dr. Lee's report, and having omitted one or two rather caustic epithets, softened down some severe sentences, and added such remarks as our own becoming and characteristic diffidence permitted us to offer, we have manufactured, we opine, a very readable, and we hope, not altogether uninstructive article.

The 'new operating theatre' is a fine room, lighted from above by a large window in the dome, and another in the side. The area is, as it ought to be, spacious, and communicates laterally with commodious ante-rooms. The theatre is capable of accommodating two hundred and fifty or three hundred persons. The auditors, on Saturday last, were addressed by Dr. Buck, one of the Surgeons of the Hospital, in something like the following terms:—

'Gentlemen:—Owing to the liberality of the Governors of the New York Hospital, we are able to invite you this day, to visit the new operating theatre, which has been constructed at their expense, for the accommodation of their patients, and to furnish increased facilities to the students and medical practitioners of this city, to witness surgical operations. It will be open to the profession on Tuesdays, Thursdays, and Saturdays, at 1 o'clock, P. M., when all operations, excepting those of an urgent character, requiring immediate attention, will be performed—at which time, it will give the Hospital managers much pleasure to see you present—or at least as often as your other engagements will permit.

'The operation to be performed to-day, is to remedy a case of anchylosis of the elbow-joint. The patient fell, more than a year ago, on the elbow, and bruised the part so much that he came here for relief. Under the supposition that the case was one of fracture of the olecranon, he was put under an appropriate treatment for such an accident; but when the pain and inflammation had subsided, the tumefaction diminished, and the dressings were removed, it was discovered that the joint was stiff. Various remedies to obviate this difficulty were had recourse to without producing much benefit; and he left the hospital. Finding much inconvenience from such a state of things, he again applied for admistion, and has been under observation for some time past. Several attempts to bend the arm have been made with a powerful apparatus, (which Dr. B. exhibited,) but without producing the desired effect. The force employed at last was so great as to cause some pain and a good deal of constitutional disturbance; but at present, with the exception of the affection of the joint, which is only a little swollen, the patient is in good health. The arm is bent almost at a right angle, and what is favorable in this case, pronation and supination are natural. From this it is thought that the impediment to motion is caused by anchylosis of the olecanon, and that if this process be removed, the patient will recover the use of his arm. It is now well known that wounds of the joints, even of the knee-joint, examples of which we have had in this hospital, are not necessarily fatal; it is, therefore, thought proper to perform the intended operation.'

After this discourse the patient was brought into the area, and took his place upon the operating table. The first step of the operation was the application of a tourniquet. The next was to expose the olecranon, and to sever from it the triceps and anconeus, as well as a few fibres of the flexor carpi ulnaris, and of the latter a few fibres from the inner edge of the ulna; also a few fibres of the extensor carpi ulnaris from the outward edge of the same bone. The third step was to remove the olecranon; and the last was *to do up the parts*, and guard against *re*-anchylosis more effectually than was observed in the former treatment of the accident.

It appeared to us that the first incision, did not extend quite low enough down on the ulna, to afford the necessary freedom for the succeeding steps of the operation. We were pained also to see Dr. Buck make use of so many knives as he did, cutting a little with one, sending to the stand for another, using it a little, returning to the first one, again laying it aside for a third, even for a fourth, and thus alternately many times. For these instrumental mutations we could discover no particular reason, as the size and shape of all the knives were very much alike, and their cutting qualities appeared to be equal, for the operator, as we have stated, often resumed the one he had laid aside.

The olecranon, being at length, fully exposed, the surgeon set to work with a coarse amputating saw, in order to separate it from its parent, the ulna; but as the first incision was a scanty one, the integuments impeded the motion of the saw; this occasioned some delay, retractors being sent for, and when applied, for the reason already stated, they afforded but little assistance. However, by a good deal of fretting, some progress was made through the bone, with the point of the saw, when that instrument was laid aside, and a neat little chisel substituted, and after some hammering the process gave way, and was removed. The supposed cause of the immobility now no longer existing, attempts at bending the joint were made, but it remained as stiff as before the operation. The object of the operation being to restore the lost motion, and the removal of the olecranon being thus found unavailing, force was applied, and after several efforts, the joint reluctantly yielded—the forearm flexed and extended on the humerus. The patient, we may mention, *was on the table upwards of one hour.*

As all things which are voluntarily placed before the public, ostensibly for instruction and example, become public property, we shall make a few additional remarks on the present occasion. We could see no use for the tourniquet, at all times a cumbersome instrument. We should have been pleased to see, and the patient would have profited by, more decision in movements of the operator, and a more masterlike hand in the cutting part of the operation; and we cannot sufficiently reprobate the unnecessary sponging and consequent fretting of the parts; nor can we too forcibly condemn the frequent *fingering* and feeling of the parts during the several stages of the operation, not only by the operator, but by several of the surgeons and professors present, with the exception of Dr. Mott. Such poking and kneading is not only injurious to the patients, as regards immunity from a future stormy inflammation, but also has a tendency to excite unmerited suspicions regarding the capabilities of an operator. The amputating saw and the trephine-saw used, were not very appropriate instruments; and we could not help regretting, that while surgeons make themselves proficient in science, they ought not to neglect learning the use of instruments, especially the *art* of sawing, and thereby avoid that unpleasant wriggling, too often seen in the use of this instrument. We may make the same remark as regards the chisel, which was a pretty instrument, but wholly unsuited for surgical purposes. Nor can we pass in silence that precept in modern surgery, which has become too absolute, namely, 'gradual force;' for, if a quick movement had been given to the arm, in the attempt to bend the joint, the patient would have suffered infinitely less pain than he did, and the object would have been better attained.

Some pertinent remarks from Dr. Buck, on all the bearings of the case, would have been very proper and acceptable; for of what use is it for a student only to see an olecranon or a limb haggled off? Dr. Buck would have rendered a most essential service to the student by explaining to him *how* the new injury to the joint,—a *compound*, and a more severe one than the first injury, which was a *simple* one—was to be healed, leaving the joint perfect, when the best skill of the same surgeon had proved unavailing in this respect in the first and a less severe instance. As Dr. Buck did *not* do this, we will gladly permit Dr. Lee to supply the omission.

'We have no doubt whatever,' say he, 'that all present, as well as our readers generally, will agree with us in the opinion, that the operation in this case was entirely unjustifiable. Here were pronation and supination, with the forearm about one-fourth flexed,—the parts perfectly sound and healthy, and the patient able to use his arm in all the ordinary tasks of a day-laborer, without much inconvenience. What was expected to be gained by the operation? A strong and healthy arm? But how could this be, after the triceps had been dissected from its attachments, and no process left to which it might afterwards adhere? Was it done merely with the view of procuring the power of flexion and extension, which had been lost? But of what earthly use would that power be to the poor man, unless with it the arm regained also its former strength? Can this be rationally calculated upon? No surgeon will risk his reputation by venturing any such opinion. Besides, there is no little risk of loss of the arm; and it would not be strange if the shock given to the system should even prove fatal to life itself. For what end, then, was this operation perpetrated? We know not what others may think, but we fear that the love of innovation, the fondness for *eclat*, the rage for surgical renown, the desire of establishing a great reputation, have had too much influence in this, as well as several other operations, which have lately been instituted at the City Hospital.

'The pains taken to announce the intended performance of the operation, cast suspicion on the motives of some of the parties concerned. But to bring this case to a certain and practical test, we would ask any surgeon who was present, suppose the patient should lose his arm in consequence of this operation, and should bring a suit for mal-practice, would not an action lie, and would it not be a fair case for exemplary damages? Would you swear that the operation was a necessary one, or that the slight inconvenience to which the man was subjected, in consequence of the anchylosis, rendered it justifiable or expedient?—or, we would put the question to Dr. Buck, *would you, under similar circumstances, submit to the same operation?* No, no; we know you would be the last man to do it. But in surgery, as well as in every-day life, the golden rule of 'doing as we would be done by,' must not be recklessly infringed; and yet Dr. Buck is a man who professes that he has—and we are bound to believe his profession—a great regard for the strict code of morality.

'But to leave off, at present, the painful but necessary duty of severe criticism, we reiterate the expression of our gratification at the movement which has, for the first time, thrown open the *City Hospital* to the physicians of New York, and made the surgeons and physicians of the institution, in all time coming, answerable at the bar of public opinion. That abuses must necessarily exist in an institution of this kind, whose government is a close corporation, and whose offices are filled, not by a regard to merit, or skill, or real science, but by nepotism, favoritism, patronage, family influence, and hereditary prescription, is not at all strange or uncommon; but that they should have gone on year after year, without any attempt to correct or prevent them, is indeed a matter of surprise and astonishment. It may be asked, how should we expect it to be otherwise? The governors are not medical men; they are most happily ignorant of every thing which properly pertains to their office. In other cases, men are generally elected to fill offices, for their peculiar fitness—from their knowledge of the duties connected with the situation they are chosen to fill. Not so here. All this is true, and 'pity 'tis 'tis true.' But we opine that a new era has now commenced. The MEDICAL PROFESSION OF NEW YORK is henceforth the umpire, to decide upon the merits of hospital physicians, and hospital surgeons, and they will not shrink from the task. We must have better clinical teaching than we have had heretofore,—not a few words mumbled over the bed of a patient, while a gang of hungry students are in full chase to keep up with the peripatetic teacher, half of them being unable to hear, and nine-tenths of them unable to see; but the patients must be brought into the theatre, where clinical instruction may be given so that all may hear and profit from it, and none be left with excuse for refusing to buy the hospital ticket.'

We of the *Lancet* shall keep close watch upon the operations at this hospital, and speak of them with the same freedom and the same impartiality, that we have exhibited on the present occasion. We trust we need not assure the gentlemen concerned, that we have no other motive than the elevation of our profession and the welfare of our common humanity.

By-the-by, why do not Drs. C. A. LEE, M. GOLDSMITH, STEWART, and FORRY, get up a medical journal? There is 'ample room and verge enough' in this city, for at least half-a-dozen medical periodicals. The astonishing success with which the *Lancet* has met should stimulate the literary and scientific men, with whom, as is so well known, the profession abounds in New York, to great efforts in the publishing department. What a large number of physicians and surgeons here, are qualified to enlighten the medical world! How many brilliant and successful operations are every week performed! What splendid discoveries in therapeutics, and all the branches of medical science, are every day made! Yet owing to the modesty and retiring disposition of the great mass of the profession in our city, and the want of a sufficient number of vehicles of communication with the public, these valuable discoveries, original views, and startling surgical exploits are lost to the world. Brethren, ought these things so to be? Certainly not. Let the distinguished men, then, whom we have named, come forward, and join our humble selves, in our efforts to advance the interest of medico-chirurgical science.

Dr. Goldsmith is, we know, well acquainted with the past history, and present condition of the Crosby street School; Dr. Lee is equally well acquainted with the 'men and measures' of the young establishment at the Stuyvesant Institute, and is besides, thoroughly conversant with the character, history, and conduct of all these honorable and disinterested *cliques*, which are so zealously engaged in promoting the interests of science, the welfare of the human race, the reputation of their brethren, and the prosperity of their own pockets. The journal which Drs. Lee and Goldsmith could get up, would be invaluable. It might be called '*The Esculapian Paul Pry, and Discreet Medical Intelligencer.*' The mercurial energy and peripatetic habits of Dr. Goldsmith, united with the tact, prudence, and conciliating disposition of Dr. Lee, would form a most useful coalition. And, then, their intimate acquaintance with medical abuses, and their earnest devotion to the cause of reform! Oh! come, come, gentlemen, give us your aid—no longer hide your light under a bushel—let not a false delicacy and restraining modesty, prevent you from publicly assuming the habiliments of laborers in the work of Reform and Progress.

The introductory lectures at the Stuyvesant Institute have been delivered during this week; those at the College of Physicians and Surgeons will be given next week. In our next number we will offer some remarks on these discourses, and examine the condition and prospects of both schools.

In a case of cataract, Dr. Alfred C. Post operated very neatly at the Hospital on Thursday last, but no cases of interest or importance were presented on that day, or the Tuesday preceding.

A Popular View of Homœopathy. By the Rev. Thomas R. Everest, Rector of Wickwar. From the Second London Edition, with Annotations and a brief survey of the progress and present state of Homœopathy in Europe. By A. Gerald Hull, M. D. New York. Wm. Radde, 222 Broadway. 1842. 8vo. pp. 343.

We confess that we have been disappointed in reading this work. Homœopathy may well exclaim, 'Save me from my friends!' We will, on another occasion, give a more extended notice of this volume, and present our opinion of the merits and demerits of the homœopathic 'system.'

THE MEDICO-CHIRURGICAL REPORTER.

On Carcinoma in General, and Cancer of the Stomach.

BY JOHN LE CONTE, M. D., OF SAVANNAH, GA.

[Continued from page 287.]

Statistics.

It is extremely difficult to draw any satisfactory deductions from statistical returns, unless they involve a large amount of announcements collected from vast extents of country, and extending over a considerable period of time. Independently of the vagueness of the terms which are employed in denoting the causes of deaths, we have other kinds of vitiating elements, arising from difficulty of diagnosis in many cases, and also from the ignorance and carelessness of the individuals who furnish certificates. Of late, however, the systems of registration have been so much improved, and such advances have been made in the science of pathology, that we may hope that the concomitant errors must be so far eliminated by the extended series of observations, as to afford approximative results of the most interesting and useful import to the medical philosopher.

It has been estimated that when 1 person in 100 dies annually, 2 are constantly sick. If, then, we admit the rate of mortality for England and Wales to be 2 13 per cent., and the population to be 14,000,000, it follows that, about 600,000 are constantly sick; and if we extend the same ratio to Scotland and Ireland, the number increases to 1,130,000, or 1-24th of the whole population. (Vide McCulloch's Statistical Account of the British Empire, vol. 2, p. 522. 2d Ed. Lond. 1839.) Now if we assume the population of the city of New York to be 315,000, and the annual rate of mortality to be the same as in the forego ing estimate, (and it certainly is much higher,) it appears that about 13,125 individuals are constantly sick. Supposing the number of practitioners to be 700, it follows that somewhat above 18 patients are, on an average, continually allotted to each physician. But as many of these are affected with diseases which do not demand medical attention, and a greater number are unable to employ such assistance when required, and perhaps, a still larger number resort to the public institutions for that purpose; we may not be placing the proportion too low, by assuming that about 8 patients are, on an average, constantly under the care of each practitioner. If we suppose each patient to pay, on an average, one dollar per day, it appears that the average annual income of each physician is about 2,920 dollars, and the aggregate amount of expenditures for medical services 2,044,000 dollars per annum. Although great allowances have been made in the preceding calculations, yet the result seems to indicate that our estimate is much too high; but as the data are *constants*—deduced from an analysis of natural laws—the *variable* elements can be easily adjusted to the circumstances of the case. We have made this apparent digression with the hope that such calculations may be of some interest to the curious, as affording data for computing the degree of amelioration which our profession is capable of bestowing upon the afflicted.

With regard to the prevalence of carcinomatous affections, it is very difficult to make any very satisfactory deductions from the bills of mortality, on account of the great confusion of terms which prevails among such diseases. We have endeavored to guard against such a source of error, by throwing together the number of deaths from *cancer* and *scirrhus*, when they are recorded under separate heads. It will be seen that *age* and *sex* also come in as complicating elements into our computations.

First, with respect to the influence of age. Of 1615 deaths at Carlisle, there were 6 caused by cancer. (McCulloch, Op. cit., vol. 2, p. 584.) The influence of age is thus exhibited:—

Ages.	*Total deaths.*	*Deaths from Cancer.*	
20 to 40	160	0	
40 to 60	202	2	or 1 in 101
60 to 80	286	4	or 1 in 171.5
20 to 80	648	6	or 1 in 108

Among 4095 deaths of persons assured by the Equitable Society, there were 43 cases of cancer. (McCulloch, Op. cit., vol. 2, p. 585.) The number of deaths from cancer at 6 intervals of age, were as follows:—

Ages.	*Deaths from Cancer.*
30 to 40	2
40 to 50	5
50 to 60	14
60 to 70	15
70 to 80	4
Above 80	3
Above 30	43

From these tables, it appears that the period of greatest mortality from cancerous diseases is between the ages of 50 and 70.

The subjoined table will show the whole number of deaths from specified causes—the number of deaths from cancer—the proportion of deaths from cancer to the general mortality—and also the ratio per 1000, which occurred in England and Wales during the years 1838–'39. (Lond. Lancet, vol. 1. 1841–'42. p. 573, et seq.)

Year.	*Deaths from Specified Causes.*	*Deaths from Cancer.*	*Ratia to Gen. mortality.*	*Ratia per* 1000
1838,	330,559	2,448	1 in 135.03	7.40
1830,	330,497	2,691	1 in 122.81	8.14
Average of both years,			1 in 128.92	7.77

We have already observed that carcinomatous affections rarely attack individuals before the middle period of life: this was evident from our former tables. Perhaps we are safe in assuming that they *never* occur before the age of 20; or if they do *occasionally*, the occurrence is so rare as not to affect the general results of the assumption to any appreciable extent. Now, we are warranted by general statistics, in assuming that at least one half of the annual deaths take place under 20 years of age. If we suppose that all deaths from cancer occur *after* this period of life, the following table—which is obtained from the last—would present an approximative estimate of the mortality from cancer among those whose ages render them liable to such diseases.

Year.	*Deaths from* 20 *years.*	*Deaths from Cancer.*	*Ratio to mortality over* 20.	*Ratio per* 1000
1838,	165,297	2,448	1 in 67.51	14.80
1839,	165,248	2,691	1 in 61.40	16.28
Average of both years,			1 in 64.46	15.54

This places the mortality from cancer at about 1½ per cent. of the whole number of deaths which occur after 20 years of age.

The great disparity between the sexes, in the rate of mortality from cancer, is exceedingly curious; and we are unable to assign any physiological causes sufficient to account for the difference. The various organs which sympathize with the periodical modifications of the genital system in the female, exhibit a remarkable proclivity to cancerous affections; but *why* this should be so, is beyond the provinces of reasonable conjecture.

The mortality from cancer in England and Wales during the years 1838 and '39, as shown by the following estimate, will illustrate this point:—

Year.	*Males.*	*Females.*	*Ratio of Males to Females.*
1838,	620	1,828	1 in 2.948
1839,	660	2,031	1 in 3.077
Average of both years,	640	1929.5	1 in 3.014

The following will exhibit the ratio of the deaths of each sex, to the number of deaths from cancer—as deduced from the Report of the Mortality for the year 1839. (Lond. Lancet, vol. 1. 1841–'42. p. 573, et seq.)

1839. *Sex.*	*Deaths from Spec. Causes.*	*Deaths from Cancer.*	*Ratio to Gen. Mortality.*	*Ratia per* 1000
Males,	168,321	660	1 in 255.03	3.92
Females,	162,176	2,031	1 in 79.85	12.52
Average of both sexes,			1 in 167.44	8.22

If, as before, we assume that one half of the deaths take place under 20 years of age, we have the following estimate from each sex:—

1839. *Sex.*	*Deaths over* 20 *years.*	*Deaths from Cancer.*	*Ratio of Mortality over* 20.	*Ratio per* 1000
Males,	84,165	660	1 in 127.52	7.82
Females,	81,088	2,031	1 in 39 92	25.04
Average of both sexes,			1 in 83.72	16.43

It will be noticed that, according to the foregoing computation, the ratio of deaths from cancer among *females*, to the general mortality of the same over 20 years of age, is somewhat higher than that of the annual mortality of England and Wales, to the population, and somewhat lower than the mortality of the City of New York to its population—the latter being about 1 in 37.

The annexed table, exhibiting the rate of mortality from cancer in several cities at different periods of time, will be found interesting, as developing singular conclusions with regard to the great increase of deaths from this cause which has taken place, particularly in London—a result which we would not, *a priori*, expect. We have endeavored to render this table as accurate as possible, by deducting the number of *stillborn* whenever they were included in the bills of mortality, and by adding together the number of deaths from scirrhus and cancer—although we were unable to deduct the deaths from *causes not specified*, as we did in our preceding tables.

Cities.	*Years.*	*No. of Deaths.*	*Deaths from Cancer.*	*Ratio to general mortality.*	*Ratio per* 1000.
London........	1728–57 30 y'rs.	..	..	..	2.00
London.........	1771–80 10 y'rs.	..	..	..	3.40
London.........	1831–35 5 y'rs.	..	..	..	4.40
London.........	1840–41 90 w'ks	80,321	638	1 in 125.89	7 95
New York.....	1802–08 6 y'rs.	13,182	37	1 in 356.29	2.81
New York.....	1825 1 year.	4,774	14	1 in 341.00	2.93
New York.....	1841 1 year.	8,531	50	1 in 170.60	5.86
Philadelphia....	1825 1 year.	3,539	19	1 in 186.26	5.37
Baltimore......	1825 1 year.	1,453	6	1 in 242.17	4.13
Charleston, S. C.	1825 & 9 2 years	1,602	7	1 in 228.86	4.37
Boston.........	1825 1 year.	1,361	7	1 in 194.44	5.14
Salem, Mass....	1825 1 year.	279	2	1 in 139.50	7.17
Portsmouth, N.H.	1801–09 6 years	706	8	1 in 88.25	11 33
Average of the American cities.........				1 in 216.37	5.46

It will be observed that the rate of mortality for cancer, in London, has nearly quadruplicated in a period of 113 years! The increase in New York has also been very considerable during the last twenty years. Now to what can this striking augmentation of mortality from cancer be ascribed? To some extent, doubtless, the increase is only *apparent*, arising from more careful registration, and from improvements in pathology and diagnosis. But we cannot suppose that so *great a difference* could be created by these causes, without affecting the ratio of mortality from other diseases to the same extent. It may be conjectured that the increase in the density of population, and the evils attendant upon a crowded state of society, may tend to augment the frequency of malignant diseases. But, by recurring to our former tables, it will be seen that the mortality from cancer, in England and Wales, during the year 1839, is absolutely *higher* than it is in London, being as high as 8.14 per 100, while in the latter it is only 7.95 per 1000. The causes of this augmentation must, therefore, be more general in their influences, than the vitiation of constitution produced by congregated multitudes. This remarkable increase of mortality from cancerous affections may, perhaps, by some, be attributed to the wretched condition of the immense population employed in the manufacturing and mining districts of England. Others may think that it shows a tendency to *degeneration* in our species—at various epochs, the theme of so much ridicule and witticism. If so, however, it will be observed by a reference to our table, that the deterioration is not *peculiar* to the American continent!!

It is a coincidence exceedingly remarkable that, according to the Glasgow tables, showing the average annual deaths at each age, out of 100 living at the same interval, for three quinquennial periods, from 1821–35, there has been a *progressive increase of the mortality of each sex from thirty to sixty years of age, at the rate of twenty per cent. for every five years!* (McCulloch. Op. cit. vol. 2, p. 527.) The surprise will be heightened when we reflect that this has taken place in direct opposition to the *diminution* of the *general mortality*. Under such a coincidence in *age*, is it unphilosophical to attribute the increase of mortality from cancer, and that observed in Glasgow, between thirty and sixty years of age, to one common cause or series of causes? If, however, such identity of cause be admitted, we will have advanced but one link in the chain of causation; for the question again arises, what is the cause of so great an augmentation of mortality from cancerous affections? To answer such a question in a satisfactory manner, would require a rigid discussion of such an amount of statistical matter, as we are unable to furnish under existing circumstances. We, therefore, leave its solution in the hands of those who are more competent to pursue such researches. It might be an interesting point, for future statistical investigators, to determine whether this increase of mortality is *indefinitely* progressive; or whether, like the planetary perturbations, it at length reaches a *maximum*, and then diminishes. If so, what is the period of restoration? What are the laws of increment and decrement? In short, what are the *coefficients* of these secular inequalities? These questions can only be solved when statistics shall have been brought under the dominion of rigorous mathematical investigation?

Although the rate of general mortality, in most countries, where malarious diseases are *not* prevalent, rises progressively, as the mean temperature falls below the mean temperature of the year, yet the seasons do *not* appear to affect the mortality from carcinomatous affections to any great extent. Thus, of 1032 deaths from cancer, which occurred in England and Wales during the year ending the 30th of June, 1840, the distribution according to the seasons was as follows:—

Winter.	*Spring.*	*Summer.*	*Autumn.*
276	230	261	262

This gives a preponderance of 46 deaths to the winter as compared with the spring, and the same difference is observed with regard to summer and autumn, although to a less extent. It would seem, therefore, that temperature does exert *some* influence over this disease. (Vide Medico-Chir. Rev. for April, 1842, p. 322.)

By referring to our table, showing the ratio of mortality from cancer in various cities, it will be noticed that there is an apparent tendency to a diminution of the proportion as the *latitude* decreases. Although our statistical investigations have not been sufficiently extensive to warrant any reasonable deductions with respect to the influence of *climate* upon such diseases, yet they are corroborated by such evidences from other sources, as to justify the opinion that the results they seem to exhibit are, in truth, the natural effects of climate. Mr. Henry Marshall observes that, *cancer* is in a great measure confined to the temperate latitudes. 'During a period of ten years, 16,283 patients were treated by the medical officer attached to the Civil Hospital, Gibralter;' and of this number, only eight were returned under the head of *cancer*. This is certainly a much smaller relative proportion of the disease than occurs in higher latitudes. In Jamaica, Dr. Dancer states, that 'cancer seldom occurs, and it is peculiar to *water drinkers*.' Mr. Marshall does not recollect having seen but *one case* of cancer in Ceylon, although he 'had extensive opportunities of observing the natives under disease.' (Vide Edin. Med. Surg. Jour. No. 113, for Oct. 1832, p. 332.)

CANCER OF THE STOMACH.

Dr. J. Houghton has justly remarked, that cancer or scirrhus of the stomach, must have been one of the first internal organic diseases, which attracted the attention of physicians. Some have maintained, not unreasonably, that it was described by Hippocrates under the name of *melaina*. (De Morbis. lib. 2, sec. 5.—Chardel.) Galen also mentions it, in terms which cannot be mistaken. Antonio Benevieni, as cited by Lobstein, makes particular mention of it; and Hildanus, Morgagni, Haller, and Lieutaud, have recorded several cases. (Cyc. of Prac. Med. Lond. 1835, vol. 4. Supplement. Art. Stomach. p. 646.)

With regard to the *causes* of this intractable disease, we are most lamentably ignorant. Neither is it necessary for us to notice the various hypotheses which have been broached, after what has been said when speaking of cancer *generally*. Some have imagined that a hereditary predisposition is frequently traceable. In many instances such a proclivity is not only probable, but quite in accordance with those hereditary laws which nature has seen fit to impress upon the organization of all animals, both in their physical and intellectual capacities. Haller and Chardel mention instances, in which cancer of the stomach appears to have been occasioned by pressure or blows on the region of the epigastrium. Chardel thinks that in such cases, it acts by a mechanical disturbance of digestion. Récamier supposes that the disease arises from the nervous shock, acting, perhaps, on the *solar plexus*. (Cyc. Prac. Med. cit. vol. 4, p. 653.) Mental distress of every kind, but particularly corroding cares and anxieties, with their accompanying train of dyspeptic symptoms, seem to be the most prolific causes of this species of disorganization It has been remarked, that many of the cases detailed by Chardel, were furnished him during, or subsequent to, the 'Reign of Terror.' Males are usually said to be more subject to it than females; as is shown by the rareness of the disease at the Hospital Salpêtrière at Paris, where old women are received. Dr. Baillie thought that the greater exposure and intemperance of men, rendered them more liable to chronic disorders of the digestive apparatus, and to *cancer* among the number. As deep and gloomy emotions are fruitful sources of cancer of the stomach, it has been conjectured by some that such feelings are more profound and enduring in men. By others, with greater plausability, we think, it is maintained that the genital system of the female seems to predominate in activity, and consequently bears the brunt of violent emotions—and hence, the *mammæ* and *uterus* suffer from cancerous diseases :—whilst in the male, the organs of *digestion* are more particularly affected. (Cyc. Prac. Med. cit. vol 4, p. 646.) Not that we would be so ungrateful as to countenance any opinion which imputes an undue degree of predominancy to this system in the *softer sex* ; but that it is one of the few instances, in which gallantry must yield to the rigorous deductions of science!

In common with carcinomatous affections *generally*, cancer of the stomach rarely ever attacks individuals before the middle period of life—perhaps, never before puberty. M. Andral states, that he has met with a large scirrhus tumor of the pylorus in a young man aged 22 years. (Vide Dic. de Médecine et de Chir. tom. 4, Art. Cancer, p. 469.)

In the Transactions of the Literary and Philosophical Society of New York, vol. 1, p. 519 et seq. 1815; my learned friend Dr. J. W. Francis, with his characteristic profundity of research and vividness of delineation, has presented us with a truly philosophical monograph on this fatal malady. He observes, that the extensive sympathies of the stomach, and the glandular structure of some portions of it, but particularly of the pyloric extremity, must not be overlooked as concurring circumstances, favorable to the production of affections of a cancerous character—as was remarked by Dr. Baillie, (Mor. Anat.,) in which opinion, however, he had long been anticipated by Hoffman. (Medicin. Sys. Rational. tom. 3.) The deduction drawn from the cases which Dr. Francis has recorded, is, that in almost every instance, cancer of the stomach has been preceded by protracted debility of the digestive organs. Through the kindness of Dr. Francis, I have been favored with the following note, in which he gives a brief abstract of the result of his extensive experience, with regard to the disease under discussion. He says, 'During a period of thirty years, I have witnessed,—so far as memoranda serve me for a report,—17 cases of those sad affections of the gastric functions which are denominated cancerous disease of the stomach involving scirrhus of the pylorus. In a majority of these cases the disorder involved either the pancreas or the pancreas and liver. In those instances in which the pancreas had undergone diseased modification,—being either enlarged or indurated,—pulsation in the epigastrium was an attendant symptom. Upon an autopsic examination in all these cases, eight were characterised by great disease of the pyloric portion of the stomach, and rendered nearly impervious by the hypertrophy of the parts and the closely strictured state which was induced by irritative action. I have, on a former occasion, adverted to the peculiar irritability of the stomach which marks these deplorable departures from a healthy state, and the act and manner of vomiting so distinctive and memorable. I have seen a similar manner of ejecting the contents of the stomach in yellow fever; and I was led to conclude from this circumstance, many years ago, that although the stomach was the especial seat and throne of that pestilence,—to use the language of Towne,—yet that the pyloric portion of the organ was at times more especially the part upon which the noxious agent of that fever delighted to prey. (See Townsend, on the Yellow Fever of New York in 1822, 8vo.) With one exception, all the cases of stricture of the pylorus which I have examined, have taken place in individuals of age beyond the middle period of life; several at the more advanced existence of 50 or 60 years. Six have been characterized by the lymphatic temperament, and four or five by the predominance of that excitable temperament which some have called the nervous. Eight of the cases have occurred in females: four of the male cases were those of inebriates, and three men of close intellectual pursuits. I have known the strictured pylorus and the contracted stomach often to occur in individuals diseased by the sudden influence of copious draughts of cold water on the constitution at an exalted temperature in summer. I had several cases in the hot season of 1825, which dissection illustrated. These sufferers were mostly those who had impaired the natural tone of the system by previous indulgence to excess in the use of alcoholic drinks. Yet have I examined cases which have ended suddenly of persons who were examples of sobriety, but upon whom over exertion and ice drinks wrought the fatal issue. My conversations with Dr. Goldsmith and yourself, on the physiological phenomena of vomiting, have led me to some reflection on the prominent subject, which might be dwelt upon in this hasty note. I believe that in those cases in which vomiting was conspicuous among the symptoms which designated pyloric stricture—the almost impervious state of the inferior aperture of the stomach occurred; and I am warranted by many facts in pathology, in adding, that such has been the case in several instances of gastric disorder; where after the malign and fatal influence has expended itself, the phenomenon of vomiting, with sudden and vehement efforts, was traced to the unnatural closure of the pylorus. I have known the disorganization, which in its worse condition designates stricture of the pylorus, to be the result of some five or six years disturbed health and painful suffering; and I have seen it to be the issue of but some six months depraved annoyance. The cases of death by cold water in an exalted tone of the system, and in high summer heat, will, of course, be cited as exceptious.' J. W. F.

Statistics.

As carcinomatous affections of the *stomach* are scarcely ever determinable, except by means of post-mortem examinations, it is almost impossible to collect together a sufficient number of cases to give even a moderate degree of accuracy to any statistical deductions which might be drawn therefrom. Many of the cases on record have not been detailed with that circumstantiality which is so essential to investigations of this character.

By consulting various medical journals and several works on pathological anatomy, we have succeeded in collecting the records of 67 cases of cancer of the stomach, which, in addition to the 17 cases which Dr. Francis witnessed, make a total of 84 instances of this disease. Of this number, the *sex* is noted in 77 instances :—viz. males 47, females 30. The *ages* of 22 males, and 14 females are noted, making in all 36 cases. Of this number, the youngest was 22 and the eldest 66 years of age. In 3 cases the disease occurred between 20 and 30 years; in 9, between 30 and 40; in 11, between 40 and 50; in 12, between 50 and 60; and in 1, above 60. One occurred at 22, 1 at 25, 3 at 40, 4 at 45, 3 at 54, 3 at 60, and the remainder at various intervals after 30 years of age. Among the *males*, the youngest was 22, the eldest 66; among the *females*, the youngest was 36, the eldest 56. Average age of the males =47.29; of the females =43.54.

It will be observed that—so far as they go—these statistical deductions, confirm the opinion almost universally entertained, that cancerous affections of the stomach are more common in men than women—and at the same time, corroborate the result to which Dr. Francis' experience has led him, when he asserts that such diseases usually take place 'in individuals of age *beyond* the middle period of life'—but conflict with the views of MM. Bégin and

Bouillaud, who remark that they are more frequently observed in *adult age* than at any subsequent period of life. (Vide Dic. de Méd. et de Chir. Art. Cancer. Vol. 4., p. 468.) Among the 84 cases, the *portion* of the stomach involved in the disorganization, is noted in 69 instances. Of the latter number, the *pylorus* was affected in 53 cases; the *stomach* and *pylorus* in 8; the *body of the organ* in 4; and the *cardiac extremity* in 4 instances. In 50 cases involving the *pylorus*, there were 32 *males*, and 18 *females;* in 8 affecting the *stomach* and *pylorus*, 7 males and 1 female; in 4, the *body of the organ*, 2 males and 2 females; and in 4, the *cardiac extremity*, 2 males and 2 females.

It is almost impossible to obtain any accurate statistics with regard to the relative proportion which carcinomatous affections of the *stomach* bear to cancerous diseases *generally*. When scirrhous tumors are seated in *external* organs, we are usually able to distinguish their true characters during life; but when *internal* organs are involved, scarcely any thing short of actual dissection, can reveal the satisfactory results. Under existing circumstances, this difficulty seems to be insurmountable. It is, moreover, of such a character as to affect our statistical reasonings to a very sensible extent, when comparisons are instituted with diseases less liable to obscurity in diagnosis; and this source of error can scarcely be presumed to become sufficiently eliminated, even by a great multiplicity of observations. As might be expected in such a confused state of things—the results deduced from statistics—with respect to the relative frequency of cancer of the stomach, as compared with cancerous affections *generally*—are of the most variable and contradictory character. In the bills of mortality, the *seat* of this disease is very seldom mentioned, except it be from some accidental circumstance. This is one of the many illustrations of the numerous and radical defects in the systems of registration, which have rendered an immense amount of statistical matter totally unavailable for scientific purposes. The subjoined estimates cannot, therefore, be relied upon even as rude approximations.

In 100 cases of cancer at the Hôtel Dieu at Paris, Professor J. C. A. Rècamier found that 2 occurred in males and 98 in females: 50 in the left breast, 33 in the right breast, 3 in both breasts, 5 in the uterus, 3 in the face, 1 in the tongue, 1 in the back, 1 in the rectum, *one* in the *stomach.* (Vide Rev. of Récamier's work in the N. Am. Med. Surg. Jour., vol. 11, p. 160, et seq. 1831.) Madame Boivin and M. Dugès, state that at the Maison de Santè, of 707 cases of cancer among females, admitted during the space from 1st of Jan. 1819, to 31st of Dec. 1831, a cycle of 12 years, 56 were cancer of the breast; 203 cancer of the ovary; and 409, or more than half, cancer of the *womb.* (Vide Rev. of the Work of Mad. Boivin and M. Dugès, in the Edin Med. and Sur. Jour., No. 117. October 1st, 1833, p. 365, et seq.) Of 7 cases of cancer, which occurred at the Westminster Hospital during the year 1841, there were 2 cases of *scirrhus pylori.* (Vide Lond. Lancet, 1841–'42. Vol. 2, p. 402, et seq.) On the contrary, among the thousands of cases of various diseases which are treated in many other hospitals, we very seldom find an instance of cancer of the stomach, under a distinct head in their annual reports. The evidence furnished by the bills of mortality, is equally unsatisfactory. Thus, of 2 deaths from cancer, reported as taking place in the town of Salem in the year 1825, 1 was caused by *schirrous pylorus.* (N. Am. Med. Surg. Jour. Vol. 1, p. 473. 1826.) Of 50 deaths from cancerous affections in New York during the year 1841, 33 are registered under the term *cancer;* 6 under cancer of the *stomach;* and 11 under cancer of the *womb.* (Vide New York Lancet, vol. 1, p. 79.) All this confusion arises from the fact, that the seat of such disorders are not always determinable—and *when* so, the reports do not generally make such a distinction; and hence it is, that whenever the situation is noted, it is usually a mere *accident:* the statistical deductions drawn from *such* records must serve only to propagate error. It is needless to remark, that these causes of error do *not* affect the accuracy of the statistics of cancer, when considered *generally*.

Before concluding this paper, we will present to the members of the society, a brief summary of the recent and curious investigations of Professor Rokitansky on the compatibility of diseases. Drs. Drysdale and Russell, the learned editors of a work entitled, 'Elements of General Pathology, by the late John Fletcher, M. D.' Edinburgh, 1842, have given us an interesting abstract of the researches on this subject. They observe that from the earliest times a vague idea has prevailed, that two diseases could not co-exist in the system, Thus, measles and small-pox have been observed to suspend, or otherwise modify, the course of each other, by Pinel, Willan, Bateman, De Haen, Vogel, Horn, McBride. The same is the case with several other diseases. (Fletcher. Op. cit. p. 145.) But it remained for Professor Rokitansky to place this matter in a new light, by submitting it to the rigorous test of statistical comparison. He found that *typhus* and *puerperal fever* are very rarely complicated. (p. 146.) So also with regard to *typhus* and *cholera*, and *typhus, dysentery*, and *cholera*, although the two last may co-exist. (p. 147.) In a series of 340 cases of *cancer* in its various forms, Rokitansky found that it by far most frequently occurred in those who had not the slightest traces of ever having been affected with *tuberculosis.* Sometimes it was found to occur, when previous tuberculous action had been extinguished, but very rarely simultaneously; and even then, only when the tubercle was in a stage of retrograde metamorphosis. (p. 150.) Fully to appreciate the value of such evidence, we should bear in mind, that at Vienna, where these observations were made, the average number of deaths from tubercular diseases is one-third of the whole number of deaths, although many more probably are affected with tubercle; at this average, 113 out of the 340 cases of cancer should have shown traces of tuberculous depositions.

Prof. Rokitansky decides that *tubercles* are incompatible with cholera, with typhus, with dysentery, and with serous cysts. (pp. 148, 149, et 151.) The last conflicts with the views of Baron, Kühn, and Carmichael, who describe tubercle as arising from a transmuted hydatid vesicle. Sebastian corroborates Rokitansky's views of the subject, although Cruveilhier mentions having met with hydatids and tubercle in different parts of the same lung. In 108 cases of *aneurism*, Prof. R. has only seen five cases of tuberculosis, and these were in their stage of retrogression. (p. 151.) In 143 cases of *hypertrophy* of the *heart*, he did not find a case of tubercle in an active state. In 50 cases of *spinal curvature*, only three were considered exceptions, and in these the curvature was trifling, and the existence of the tuberculosis questionable. (p. 152.) 'From the analogy of the effects of cyanosis, hypertrophy of the heart, curvature of the spine, and pregnancy, in giving rise to a predominating venosity of the blood, while they differ from each other in almost every other respect; Rokitansky is inclined to ascribe to this venosity, the incompatibility with tuberculosis displayed by the above-mentioned conditions.' (p. 153.)

Dilatation of the *bronchiæ* also gives rise to remarkable immunity from tubercles, probably from the consequent active dilatation of the right side of the heart. This is the cause of the exemption from tubercles usually displayed by asthmatics.

Lastly. Rokitansky observes, that *chronic diseases* of the *stomach*, such as formation of *scirrhus* and *ulcers*, are incompatible with tubercle: in 44 cases, only four were affected with tubercle, and of these, two had the ulcers healed. (p. 154.) On the other hand, Prof. R. concludes from analogous researches, that *serous cysts* may co-exist with all kinds of *cancerous degeneration*, (p. 154;) which seems to corroborate the ingenious views of Dr. Hodgkin, with regard to the intimate structure of scirrhus tumors, to which we have previously adverted.

These investigations are not only of incalculable interest to the devotee of science, who seeks for the truth amid Nature's mysterious works for the truth's own sake, but likewise highly important in a philanthropic point of view, to him who looks forward to the amelioration of the painful sufferings of a large portion of mankind. May we not hope, that they will ultimately lead to some practical results, with regard to the management of a class of intractable maladies? In such cases, would it not be warrantable to use every means in our power, to repress the malignant disease, by establishing, if possible, an incompatible condition of less fatality? It may not be considered improper to remark here, that there is at present, a patient in one of the phthisical wards of the Bellevue Hospital, in whom well-marked tuberculosis of the lungs has been, apparently, almost completely arrested by the appearance of a scrofulous ulcer on the ankle.

We regard this method of applying statistical researches to the elucidation of particular diseases, as fraught with the most intense interest to the medical inquirer. In our country, very little of such matter has been brought to bear upon such investigations. It is to be hoped that the zealous co-operation of the members of this society, will contribute much towards furnishing the necessary desiderata for accurate deductions.

John Le Conte, M. D.

ITEMS AND INTELLIGENCE.

The late Professor Emmet.

At a full meeting of the Faculty of the University of Virginia, convened for the purpose of recording a tribute to the memory of Dr. John P. Emmet, late Professor of Chemistry and Materia Medica in this Institution, resolutions were unanimously adopted, honorable to themselves and to the deceased.

'As a cultivator of physical science, his talents for original investigation won for him a high place among the scientific of our land. As a professor, his earnestness and vivacity, his learning and eloquence, his modesty and high-toned independence, his mingled firmness and urbanity, secured to him the respect and cordial affection of his pupils, his colleagues, and all the authorities of the University; and his valuable services in this capacity, from the foundation of the institution until his death, will form an important chapter in its history. As a citizen and friend, a son, a brother, a husband, and a father, he adorned his station by every social and domestic virtue; and long will the memory of his genius and excellence of heart be cherished by his colleagues, his former pupils, and the wide circle of relatives and friends who now lament his loss.'

Arrest of Bleeding after Tooth-Drawing.

BY OSMOND WOODFORD, M. D.

In a case which occurred in my practice last week, a lady of middle age and weak fibre applied for some styptic to arrest the bleeding from the alveolus, after the extraction of the last molar by a dentist of some note. I applied the compound tincture of Benjamin and a compress of lint, with no effect; afterwards the tincture of the sesquichloride of iron, which also failed; and the patient becoming faint, I gave her some brandy and water, when she rallied. I tried tincture of catechu and nitrate of silver with the same result; and, as Dr. Cochrane observes, the nitrate of silver arrested it for a short time, but not effectually, and eventually it was arrested with the spirit of turpentine.—*London Lancet.*

Note from the President of the Society of Alumni of the College of Physicians and Surgeons.

In closing the first report of the association, we would beg leave to state, that on account of the fact that the association has not yet gone into full operation, we have not prosecuted those inquiries which we intend to undertake. Circular letters will soon be sent to the members, asking their attention to certain specific objects of inquiry.

In advance, we would propose one subject for investigation, for the purpose of showing the mode in which the society is to be conducted. With the consent of the committee, it will be one of the series to be presented hereafter more in detail.

Have you known any form of fever to occur in the neighborhood of decomposing animal matter? If so, can it fairly be attributed to such decomposition, and what is the nature of such disease?

This subject is chosen as an example, because the question has arisen in a court in this city, and the evidence given was contradictory. If the members of the association were to give us all the facts which they may have noticed, bearing upon this question, we might arrive at some conclusion which might be satisfactory.

The Alumni of the College of Physicians and Surgeons of the University of the State of New York, are entitled to membership, on signing or authorising the signature of their names to the constitution, and paying the fee, which is two dollars.

We ask the co-operation of all our fellow graduates, who approve of the objects of this association.

Middleton Goldsmith.

WEEKLY REPORT OF INTERMENTS
In the City and County of New York, for the week ending Oct. 29, 1842.

35 Men, 33 Women, 58 Boys, 40 Girls. Total, 166.

DISEASES.

Apoplexy	1	Intemperance	0
Asthma	2	Inflammation	0
Asphyxia	0	Of liver	3
Atrophy	2	Of bladder	0
Abortion	0	Of brain	0
Bleeding	1	Of stomach	4
Bleeding from stomach	0	Of throat	0
Bleeding from lungs	2	Of lungs	7
Burned or scalded	1	Of bowels	3
Cachexia	0	Of heart	1
Cholera infantum	4	Of bladder	0
Cholera morbus	0	Insanity	0
Congestion of the Brain	3	Jaundice	1
Consumption	33	Killed by fighting	0
Convulsions	11	Lues Venera	0
Croup or hives	3	Mortification	0
Cancer	1	Malformation	0
Debility	4	Marasmus	6
Delirium tremens	0	Measles	1
Diarrhœa	4	Old age	2
Death from poison	0	Organic disease of heart	1
Dropsy	2	Palsy	0
Dropsy in head	3	Retention of urine	0
Dropsy in the chest	2	Rheumatism	0
Drowned	1	Spinal disease	1
Dysentery	1	Suicide	0
Erysipelas	0	Sprue	0
Eruption	0	Small-pox	1
Fever	1	Tumor	0
Scarlet	7	Teething	1
Typhoid	6	Ulceration of intestines	0
Nervous	0	Unknown	4
Remittent	0	Ulceration of throat	0
Billious	3	Ulcers	0
Inflammatory	0	Varioloid	1
Intermittent	0	Whooping cough	2
Hip Disease	0	Worms	0

John H. Griscom, City Inspector.

City Inspector's Office, Oct. 31, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, NOVEMBER 12, 1842. No. 20.

COMMUNICATIONS.

MEDICAL REFORM.

No. 3.

Reform of Hospital Management—Hydrophobia.

TO THE EDITOR OF THE LANCET.

Sir :—

Now is the time to establish hospitals, colleges, and infirmaries, on truly humane and philosophical principles. Institutions, such as we should wish to see in operation, would be deprived of all those facilities to misrule and mischief, which now tarnish the glory and prevent the usefulness of our present houses of study and charity. No room would be left for extortion, and the poor student could obtain equal advantages with the rich. In this respect the French policy is superior to the English, and the latter are clear-headed enough to see it, and candid enough to own it. In the *London Lancet*, that admirable journal, are the following judicious remarks on this question, and they apply as well to us :—

‘ At present we propose to make an observation or two upon the exorbitant charges of hospital attendance. We take the charges of St. Bartholomews' hospital as an illustration. This institution is supported by accumulated property, and by subscription ; yet for visiting its wards, and walking round with the physician eighteen months and with the surgeon twelve months, the student is compelled to pay forty-three pounds, (equal to two hundred dollars !) For what is the enormous fee of forty-three pounds paid ? The greater part is clearly for seeing the patients, as the value attached by the medical officers themselves to their lectures, is not a fourth of the sum. The fees for the medical and surgical lectures together amount to £10 10*s.*; and if we allow this sum for the clinical instruction, £32 10*s.* will be left as the amount *extorted* for the examination and inspection of the patients. The medical officers expose their suffering fellow-creatures to public view for money ; unlike the owners of some inanimate museums, they do not throw the doors open to the scientific spectator, but insist on a heavy passing fee ; while they have not even the merit of founding the asylums of helpless humanity, which they thus throw remorselessly into the crucible of their insatiable cupidity. If the medical officers of the public hospitals had to support the patients and the expenses of the establishments, their present fee would be justifiable : the students' fees at University College are legitimately devoted to this object ; and as the capital sunk on the building, and the entire expenditure of the other hospitals are provided by public charity, and public money, it is only by nefarious rapacity that the hospital surgeons and physicians extract more than a fair fee for clinical instruction from the student's pocket. The fee for attending the clinical lectures should not exceed £5. Instead of paying seventy guineas, as at St. George's Hospital, the student should pay seven guineas, and no charge should be made in the institutions supported by public charity, for visiting and examining the patients. The money saved in this way would prolong the period of study, and the public, who uphold these charities, would reap the benefit in being attended by more skilful and better educated advisers.

‘ Instead of making the offices of dresser, of house surgeon, of apothecary, of surgeon and of physician, the rewards of merit and temptation to exertions in the cause of science, *the mercenary officers sell these places.* Any gentleman who may desire to dress patients at St. Bartholomew's Hospital, during twelve months, must pay fifty guineas for the appointment, in addition to the fifteen guineas for attending the medical practice. At Guy's and St. Thomas' Hospital, the fee is equally enormous ; and these are not hospitals erected like the University College Hospital, by a proprietary body as a commercial speculation, but the ancient, venerable charities of the land, dedicated by its Christian citizens to the service of humanity and science. In these temples of the poor, the money changers have raised their stalls.

‘ How differently these matters are managed in France, a country which England has led, and *ought* to lead [why ?] in the conduct of social and political institutions. There the student of every country has access on the easiest terms, either without any payment at all, or by taking out inscriptions of thirty france every three months to the lectures. There the dresser—the *interne*—has not to purchase his place from trading officers, but obtains it by concours, and is paid a salary. Englishmen, to the eternal honor of our rivals, have frequently obtained the appointment of interne, while we look in vain for the counterpart of this liberality in the London hospitals. Neither Frenchmen nor Englishmen can enter the portals of the London hospitals without finding the unhallowed fingers of the physicians and surgeons diving deeply into his pockets.

‘ It is plausibly said that the medical men are not paid for their attendance in the hospitals, and that this justifies the heavy fees which they take from the student. But why are they not paid regular salaries for their attendance, or fees regulated by the time and frequency of the attendance. The patients would not then be neglected, and there would be no pretext—it is but a pretext—for one of the greatest impositions recorded in the history of medicine.’

We say amen to this, and hope that the time is coming when our hospitals, infirmaries, and colleges, shall be able to pay salaries to the officers of these institutions according to their grade. But there is one fact which should regulate the amount of salary—it is this :—A station in one of these institutions, and we now are speaking of hospitals and infirmaries, as well as medical colleges, brings a man more immediately to the acquaintance of the community, and besides the honor attached to the office, it increases his private practice tenfold, a practice which he never could have obtained, but for his position in a public institution. Now medical men are apt to forget all this; and after a time they begin to think they are laboring for nothing. Still, however, they should have a salary; and then their lawful attendance could be exacted of them with a better grace.

The medical corps, it is painful to say, pursue their own advancement without much reference to the public good; and in this respect they are less patriotic than either lawyers or divines. Unless they are reminded of it, they will never be roused to consider it an odious feature in their collective character. Each physician attends to his own practice, but he does not allow himself any extended views towards the community, such as the clergymen have when they recommend public schools, the building of new churches, and similar moral and religious objects; such as the lawyer has, when he is strenuous about the enactment of certain laws for the further protection of liberty and property.

If we, therefore, look to our clergy for the improvement of religion and morals, and to our statesmen—who are generally lawyers—for safety against agrarianism and anarchy, we should most naturally depend upon the medical corps for protection from imported and domestic diseases. It is this body of men who are to guard us from contagious diseases, and recommend and urge all sanatory measures; for it is they who best understand the danger. Yet how few there are who originate or meddle with any plan either for prevention or cure.

Yes, we insist on it, that the heaviest charge against them, is their utter indifference, *as a body*, towards a sanatory preventive system; leaving all such matters to the police regulations, as if it were a matter that did not concern themselves! Physicians are the true guardians of our health, and they neglect us. If merchants, lawyers, divines, and artizans were to confine their attention to their own *individual* concerns, what would become of the body politic, and why should the medical fafulty be exempt.

One fact will explain our meaning. Here is a frightful disease called hydrophobia; the city police, goaded on by individual reprimands in the public papers, bring forward the dog law. Who cares for the dog law? No one; for a few days after the 'Whereas' appears in print, a dog or two are muzzled, and there is an end of it. Now we hold it to be the bounden duty of the medical faculty to protect against this horrible disease—arising out of the supineness of the city authorities.

In this disease, indifference is doubly criminal; for in other diseases, if the physicians neglect preventive means, they have the conviction, the *hope* at least, that the remedy or cure is in their own hands. But with hydrophobia there is no such conviction—there is no hope.

These are signs of the times which wise men should not disregard. These signs are displayed in the moral as well as physical organism. Convulsions in the physical world are always accompanied by correspondent derangement in the moral world. Earthquakes, tornadoes, volcanic, and oceanic excesses, disturb the equal laws of motion and of electric affinities, and the moral atmosphere suffers. This is no new nor idle theory, but a well marked doctrine. These physical derangements descend to the most infinite minutiæ, and this is one cause of the prolific and malignant tendencies of miasmatic, animalcular life. The virus, when once generated, can be propagated *ad infinitum*, if there be an abundant accumulation of nutriment. The scourge of plague, yellow fever, and cholera, which desolated places where these diseases never existed before, proves that facilities had been given to the propagation of each peculiar virus. There have been, to be sure, solitary cases of cholera and yellow fever, which appeared year after year, and ended fatally. *But unless the ground was prepared, the seed would not spring up.* Miasmatic virus, in its incipient state, is for ever floating in the atmosphere; and when the carelessness of man allows the sustenance of viritic animalculæ to accumulate, we must expect a plentiful harvest.

It is thus with the canine virus; age after age, year after year, has the bite of a rabid animal been fatal to man—*yet the dog lives;* the poison is in *him*, and in *him* only. His body furnishes the nidus and the nourishment to which his own life and that of man falls a sacrifice—*and yet the dog lives.*

With the enemy which causes yellow fever and cholera we grapple. Our remedial efforts, therefore, are to cut off his supplies of sustenance, and to prevent him from gaining a future foothold. But in all the preventive methods we go only by a sort of guess work, for no one can clearly point out what causes these diseases. But with hydrophobia the case is very different. The enemy is before us, in our streets and houses; we know where the poison lodges, on what it lives, and in which way it operates—yet we encourage the dog without a suspicion that we are nursing up a poison, which either sooner or later will overwhelm us with dismay; and yet—we say it with indignation—the dog is let loose upon us.

We have sad and frequent warnings that the dog *must not be domesticated*—that he must not be tamed from the savage state for the purpose of destroying human life. If the shepherd requires his aid, let him make use of his services; that does not concern the citizen, for in cities the dog is useless. The dog is a curse inflicted upon us by reprehensible indifference. Our physicians know all this, and yet they shut their senses to the crying evil. Let them, as we observed, watch the signs around us, *physical* as well as moral, and they will perceive that the *accumulative* principle is carried out also in *morbid poisons*, affecting the body as well as the mind.

It is said that the *French*, in their hospital practice, have little value for human life; the Americans are reproached with their indifference on *all* occasions. The vast destruction of life by carelessness in the management of steam power, does not come within the province of our medical guardians; but the destruction of life by the power of morbid poisons, does affect their obligations to us. When a man takes upon him the duties of a physician he is wedded for life, and he must take us for better or worse. We place our lives in his hands, and if *we* do not know the precise amount of our claims on him, *he* knows it himself. Medical men know the progressive character of morbid poisons, and they know that what has occurred with cholera and yellow fever may occur with hydrophobia, and a horrible destruction it will be!

Because cholera and yellow fever have died away, are we not aware that they may return? Are we less sensible to the horrors of these diseases, and to the misery they inflicted? No,—they still urge us to preventive measures to guard against a return. Because hydrophobia has only appeared in a few subjects, do they flatter themselves that it will never spread? Because hydrophobia is a disease which they have never been able to conquer, must they allow the *cause* of it to exist? Do they not perceive—do they not foresee that the time will come when this rabid poison, at some period when every thing is ready for its propagation, will overwhelm us so that there will be weeping and wailing and gnashing of teeth? If they do not, there are others that do.

Mr. G. T. Hayden brings many charges against the medical brotherhood, and we add the high charge of their indifference to the disease called hydrophobia—the loss of life by the bite of a mad dog. Hydrophobia is a *disgraceful* disease, for it is so easily prevented. We do not know the lurking place of other poisons, but of *this* one we do. The disease is in the dog, but as the dog is a playfellow, and a man fondly calls it his friend, we permit it to hide itself in the body of this animal. It appears as if the guardians of our city are afraid that the owners of dogs will rise *en masse* and stone them if they exterminate the dog. They need not be afraid, the time is passed for such ignorant outbreaks. Cheselden was mobbed and stoned for perforating the tympanum for the purpose of curing deafness, and forty years ago physicians were mobbed and maltreated for dissecting dead bodies in hospitals. The Eustachian tube is now pierced with impunity, and dissections are carried on in hospitals without hindrance.

The medical corps, therefore, ought to stir themselves in this matter of the dog, and never rest till dogs are for ever driven from the city, never to return. This is one of their duties—this is a reform in our police devoutly to be wished; and if the medical faculty will only set about it earnestly, the dog will be banished. If we look a lunatic full in the face we conquer him; so if we look the dog mania in the face the evil will cease, and the next generation will wonder how it happened that an obscene and useless animal was allowed to throw us into such frightful panics.

After having relieved our conscience on this point of hydrophobia, let us add *prophetically*, that if there be not a reform in our hospitals and colleges, and in the general system of the medical corps itself, the people at large will take the matter into their own hands and make thorough work of it. If the reform herein suggested, and what has of late been urged elsewhere, does not speedily take place, the hasty, excitable part of the community will undertake such a reform as will drive every respectable medical man out of the profession. Jack Cadeism is hard at work, levelling all distinctive landmarks. The *aristocracy* of learning is baneful to them, and they hint that this granting of diploma is all humbuggery. Reform ye, therefore, or there will be a *living movement* against which you will struggle in vain.

Q. E. D.

REVIEW DEPARTMENT.

Dr. Francis on the Anatomy of Drunkenness.

[We have great pleasure in appropriating a portion of this week's *Lancet* to the publication of this letter, on the abuse of Alcoholic Drinks and the Anatomy of Drunkenness, which appeared some short time ago in Dr. LEE's American edition of the celebrated work entitled Bacchus. None of our readers will complain of such an occupancy of our space.—ED. L.]

NEW YORK, July 10, 1840.

DEAR SIR,—The intimate connection and close dependence of the mental faculties with the organization and functions of the physical man are, perhaps, in no way more clearly demonstrated than by the influence which alcoholic drinks exert on the human system.

I will briefly embody some of the more prominent facts connected with the phenomena of intemperance, so far as they are associated with morbid changes in the physical structure, occurring in persons who have long indulged in spirituous potations. They cannot but furnish a convincing reason against the habitual use of ardent spirits, on the strongest medical grounds. It is for the divine, the moralist, and the economist to attack the pernicious habit on other principles equally or more potent. All that I aim at, on this occasion, is to group together a number of the most striking occurrences we encounter when professionally called upon to prescribe for the intemperate, or to perform a more unpleasant service which occasionally presents itself as a duty; I mean the drawing up a report after death, of the disordered changes wrought by alcohol in the corporeal system of the inebriate. Differences of constitution, of age, of temperament, of business occupation, variety in the drinks themselves, and the longer or shorter period in which they have been indulged—as all these circumstances modify the force and termination of drunkenness, so also do we find, by post-mortem examinations, corresponding variations in the cadavers of those who have perished by so lamentable a cause.

The *malade imaginaire* affords good proof that Molière drew some of his leading illustrations from cases of what are now denominated *delirium tremens* or *mania a potu*. The disturbed, unequal, and often exhausted state of the faculties of the minds of persons who have long indulged in spirituous drinks is familiarly known; and the same condition of the functions of the body has as often been observed. Hypochondriacism or other species of mental aberration are noticed in one class of patients, and functional derangement in another, but oftener both in the same individual; and hence, too, we see alcoholic insanity conspicuous among the numerous forms of deranged manifestations of mind in many of the inmates of our public institutions appropriated to the treatment of lunacy. The greater prevalence of intemperance among men than women, Dr. Burrows, of London, asserts as the reason why insanity prevails in the United States most among males, although women, from greater nervous susceptibility, would seem at first more predisposed to it. Rush assures us that on inquiry in regard to the insane confined in the Pennsylvania Hospital, he found that one third of the whole number had become deranged from intemperance. Dr. Woodward, the superintendent of the Lunatic Asylum at Worcester, Massachusetts, reports the same cause as the most frequent source of disordered intellect in that establishment; and Dr. McDonald, late physician of the Lunatic Asylum at Bloomingdale, New York, assures me that more than one fourth of the patients of that excellent institution are brought there from the sad effects of inebriety. A close inspection of many hospitals for the treatment of the insane, both in this country and in Europe, long ago convinced me that inebriety was the prolific source of mental aberration. In short, in our *mixed* population, (I mean of *foreigners* and *natives*,) we find this type of disease more abundant than any other of the disorders which are classed under the denomination of insanity. Gloomy as this picture may seem, it has this cheering feature, that inasmuch as the mania of intemperance is more medicable than several other forms of the complaint, we may, in cases of this origin, often promise a success in our means of cure, when capable of carrying out our remedial measures into full effect, that might be altogether unwarrantable in many instances arising from a different source.

As medical witness in our courts of criminal judicature, I have often been summoned to give testimony in cases of death occasioned by intemperance, or by other causes which have resulted fatally; and for the better discharge of this duty, have within the period of fourteen or fifteen years examined many bodies destroyed by accident, or other causes operating suddenly or with violence. The details, therefore, which I now communicate, are derived entirely from autopsic examinations thus instituted.

The body of the dead inebriate often exhibits, in its external parts, a physiognomy quite peculiar, and as distinctive as that which presents itself when life has been terminated by an overdose of laudanum. Sometimes the surface, more especially at its superior parts, as about the head, neck, and face, betrays a surcharged fulness of the vascular system; and the cutaneous investure of these parts and of the extremities is characterized by the results of an increased action of the extreme vessels, by blotches and discolorations of different hues, &c., and this state, the consequence of previous overaction and worn out excitement, has so impaired the vital energies of the surface, that effusions of a serious or sanguineous character are to be observed. Hence *purpura hemorrhagica*, an affection, in most instances, occurring in persons of depraved habits, vitiated still further by scanty or unwholesome food and deleterious drink, is often to be noticed in inspecting the cadaver of the drunkard. I remember a striking case of the extraordinary changes to which the common surface is capable of being brought, while attending a suffering victim some five or six days, the duration of his last illness. The subject was a middle-aged male, who had long indulged in the free use of distilled spirits. He died of universal dropsy. Some few days previous to his decease purple blotches were seen on his chest, shoulders, and abdomen; and hemorrhagic discharges from the surface of his inferior extremities were observed in several places; and these discharges continued until the close of life. The quantity lost in this manner was many ounces, nor would kreosote or pyroligneous acid, or any other remedy modify in the least the sanguineous discharge. I have also known old cicatrized wounds to bleed anew in such subjects, previous to their decease; and blistered surfaces to become extremely annoying. It is difficult to set forth the numerous modifications of disordered action manifested in the extremities; the inferior limbs are the special seat of suffering, because these parts partake largely of that indirect debility which so certainly follows improvident excitement. Sometimes we see in these desperate habits the elephantine leg. A formidable catalogue of cutaneous affections is a legitimate sequel to a long course of intemperance. Five of the most protracted cases of ichtysis for which I have prescribed, owed their origin to the depraved condition induced by gross intoxication. The tuberculated aspect of Bardolph's face is but a very limited part of the cutaneous annoyances of inebriety.

The brain of the intemperate is the rallying point of much disorganizing action; but to detail all the morbid changes of this organ from this cause would trespass too much on your circumscribed limits. Dissections have shown preternatural fulness of a venous character; the membranes of the brain gorged with blood; in some instances, where the patient has perished from protracted delirium tremens, traces of the inordinate operation of the poison have been most distinctly seen at the basilar or inferior portion of the skull, and a highly vascular or surcharged state of the whole brain, but more especially of the pia mater, with serous effusion between it and the arachnoid tunic. The substance of the brain itself is generally more or less invaded by serum, and hence the uncommon moisture of its cut surfaces: in the lateral ventricles as well as at the base of the brain, large quantities of serum have also been remarked. Dr. Cooke, of London, in his work on nervous diseases, has stated the case of a man who was brought dead into the Westminster Hospital, who had just drank a quart of gin for a wager. The evidences of death being quite conclusive, he was immediately examined, and within the lateral ventricles of the brain was found a considerable quantity of a limpid fluid, distinctly impregnated with gin, both to the sense of smell and taste, and even to the test of inflammability. Dr. Kirk, of Scotland, has given a like fact by the dissection of the dead body of an inebriate. The fluid of the lateral ventricles of the brain exhaled the smell of whiskey; and when he applied a candle to it, in a spoon, it burnt with a 'lambent, blue flame.'

I have repeatedly had cases partaking much of the same character falling under my own inspection. Upon removing the bony covering of the brain, the exhalation of ardent spirits on several occasions was strongly manifested to the olfactories of the by-standers, as also the effused fluid, conspicuous for its quantity and quality. On one occasion, while holding an inquest over the body of a drunkard suddenly cut off, some spectators, who entered the room where the anatomical examination was made, asked what puncheon of rum we had opened. It is worthy of record that these effusions of serum from peculiar circumstances, as by injury from falling, or blows inflicted, take place most rapidly in some instances. I have known five ounces of serous fluid taken from the lateral ventricles of a gross drunkard within two short hours after his zig-zag pedestrian movements were arrested by an accidental blow on the head. What portion, indeed, of so copious effusion existed in the cerebral organ, while life still sustained its controlling influence, I am at a loss to calculate. The occurrence is, nevertheless, instructive, because it shows us that the citadel of thought may become the receptacle of agents whose influence, at war with the wholesome exercise of the mental faculties, predisposes to extreme mobility in the nervous system, and, from the slightest causes, urges on, with perhaps an irregular, but yet certain issue, to the complete dethronement of all its noble prerogatives. Other post obit examinations of a similar sort might be stated corroborative of this sad condition of the brain, whose manifestations of deranged sensation too clearly showed how far removed from a sound condition were the faculties. Hence the sudden invasion of palsy, of epilepsy, and of apoplexy, occuring in many after a debauch: hence, on some occasions, upon an investigation into the morbid anatomy of the structural part of the brain itself, we discover a preternatural softness of its substance, a pulpy disorganization, (*ramollissement*,) and that its texture has lost its distinctive peculiarities, not unlike the specimens of disorganization ascertained in some fatal cases of malignant typhus. The same abnormal state of the brain may be often witnessed in cases of death, induced by the profuse drinking of cold water in days of ardent solar heat, by persons long accustomed to diffusible stimuli, and the rapidity with which decomposition goes on in these cases is another occurrence worthy of record. As the mental action is determined by the modification of structure and condition of the brain, and every variety of the manifestation of the mental principle depends upon the condition of the cerebral organ, we feel warranted in believing that all undue or immoderate effort of the intellect, as well as every cause acting disproportionably upon the brain, either disturbs, or impairs, or destroys its wonted integrity. What sad havoc must consequently arise in the premises, when a cohort of rebellious forces invades the sanctuary of the mind, as in delirium tremens, and in the over-wrought and worn out nervous system? No intellectual faculty suffers so severely and so generally as memory in this deranged state of the brain; no *memoria technica* can supply the loss occasioned by habitual inebriation. He who indulges in the spring-time of life in alcoholic potations, will assuredly find in the autumnal period, his strongest recollections but the feeble vestiges of by-gone associations, whether of words or things. Conversing on a particular occasion with a distinguished character of pre-eminent renown in his walk in life, and expressing my surprise at the tenacity of his memory, considering his abuse of the intellectual faculties by pernicious indulgence, he disclosed to me the mortifying truth that he could no longer commit a new reading, that the studies of to-day were forgotten on the morrow; 'but Shakspeare I retain (adds he) with undiminished freshness, his language is so *adhesive*.' Notwithstanding this adhesiveness, Othello was but a blank in this great tragedian's recollections ere his histrionic career closed.* To adopt the surgeon's phraseology, there is a solution of continuity in the powers of ratiocination and of memory in the brain of the drunkard.

The thoracic viscera suffer excessively in many cases, and undergo great and permanent changes from intemperance. In those of strong predisposition to pulmonary mischief; in habits of a strumous or scrofulous nature we find tubercular formations, and the several changes of disordered structure, the result of over-wrought action, or inflammation. Sometimes the lungs may be freed of this oppressed state of hæmorrhage, and their texture be released for a season, but the lesions thus induced are only the precursors of ulcerative action: in other subjects the previous tubercles secure their disastrous triumphs by purulent secretion and death. It is surprising that writers have not more generally adverted to the frequency of pulmonary consumption as occasioned by hard drinking. Dr. M'Lean assures me he has attended at least fifty cases of fatal consumption of the lungs, brought on by intemperance. Others as well as myself have found the heart unusually enlarged, and its valves so diseased as to occasion serious obstruction to the circulation of the blood. The hypertrophy of this important organ, and the condition of its valves, will account for the sudden death of some alcoholic martyrs.

Every body knows that the stomach, though armed with vast conservative powers, is compelled at length to surrender to so efficient a conqueror as alcohol. Its sufferings, though severe, are too often unheeded. Its most conspicuous changes, upon inspection, are the conditions of the mucous or villous coat, softened, or removed by absorption into its greater or cardiac extremity, while nearer its smaller or pyloric portion, this membrane in a majority of cases is thickened, of a slaty color, with its surface uneven or nippled, the results of chronic irritation. In other instances the mucous coat is seen studded with highly colored appearances of vascular fulness. In inebriates, suddenly destroyed by drinking cold water, in a state of high excitement and in very warm weather, I have found this vascular peculiarity more diffused and more vivid, with marks of abrasion. For want of a better name I have sometimes called it a stellated form of inflammation. In every immoderately warm summer we have examples of this pathological nature. In the ardent summer of 1825 I examined about thirty cases of death by cold water, in nearly all of whom were found this morbid alteration of the stomach.

Intemperance exercises a singularly direct and potent influence on the liver: the spleen and pancreas are also deeply affected by long continued hard drinking. The last mentioned organ is in some cases found to be scirrhous: the spleen is not unfrequently in a state of turgescence. In one subject I found it augmented to three times the common size: its structure is now and then extremely soft and yielding, or what is termed grumous. The researches of the pathologist have led him to describe several striking alterations in the liver: of all the abdominal organs perhaps it suffers most; and hence the despondency so often consequent upon the vice of hard drinking. The liver may become by habitual intoxication preternaturally hard or scirrhous: it may be studded with tubercles, and these may be more or less deep-seated in its texture or superficial, with or without suppuration: its whole structure may also be changed: it may be obstructed and become extraordinarily enlarged; and it is worthy of remark that the inordinate plethora of the blood-vessels, which so generally accompanies excess in eating and hard drinking, here evinces its detrimental influence in the most palpable manner. I once asked old Mr. Fife, the anatomist at Edinburgh, who was many years dissector at the university, how great was the largest sized liver he had ever encountered in his preparations of dead bodies for collegiate purposes? He answered fifty pounds!! and this occurred in the person of an inebriate who had lived long in the East Indies. When we consider that the ordinary weight of this viscus may vary, in a healthy state, from four to seven or eight or nine pounds, it might have been inferred that such a formidable liver would have created bile enough for a whole army; yet this man died with a deficiency of this secretion. The livers of those who abuse their constitutions by alcohol are, however, generally preternaturally diminished, of a pale straw color, with few traces of blood-vessels, and in a hardened or indurated state: this contracted state doubtless follows the enlarged condition usually the result of long continued disease in this organ. Sometimes excessive indulgence in fermented drinks will augment the size of this gland to an enormous extent: thus at least I have found it in a limited number of dissections.

The renal organs are, in some rare examples, partakers of the inconveniences and changes arising from alcohol. From their being summoned to inordinate action, they occasionally take what pathologists have termed a granular degeneration. I have rarely examined the state of the kidneys and have made no investigations confirmatory of this view, though this disorganized structure has been lately pointed out to me, and Dr. Bright assures us it is often seen in the kidney of the sot. Some few years past I saw an example of great enlargement of the left kidney, which upon being opened discharged nearly two quarts of purulent secretion. The sufferer had long been accustomed in secret to excessive drinking, and his morbid anatomy in divers parts was a notable display of those ravages of inebriety on the constitution so familiar to the pathological inquirer. In another drunkard I witnessed ischuria blended with cerebral symptoms. He had labored under diabetes some five weeks, and was much exhausted: the diabetic discharge suddenly ceasing, coma supervened, and he lived but a few hours.

---

* [The late celebrated tragedian, Edmund Kean.—Ed.]

Having noticed briefly the changes which occur in the heart, the liver, and in the kidneys, I might now refer to dropsy as a general result of disease in these several organs. But there is no need that I should describe its pathological relations. Whenever dropsy occurs in the intemperate, whether in the chest, around the lungs, or around the heart, in the abdominal cavities or in the general cellular tissues, as seen in the lower limbs, or in the bloated face, we are admonished that more latent disease in the heart, the liver, or in the kidneys is at work, and have grounds to apprehend the most serious consequences.

More circumstantial details of altered structure might be given you, and other parts be noticed, inasmuch as pathology is enriched with truths derived from an acquaintance with the malign changes wrought on the human economy by alcohol: but I should exceed my prescribed intentions to detail them on this occasion. It may justly be said that not a blood-vessel, nor a nerve, nor a tissue escapes the influence of the poison: the whole animal machine is the theatre of its display.

With sentiments of regard,
I remain most truly your friend,
John W. Francis.

To C. A. Lee, M. D.

GLEANINGS FROM THE FOREIGN JOURNALS.

On Gouty Concretions, with a New Method of Treatment.

BY ALEXANDER URE, ESQ., M. D.

[This is an excellent paper published in the last number of the Transactions of the Royal Medical and Chirurgical Society of London. Dr. Ure observes that it is well known that persons afflicted with gout are liable to the effusion of a white liquid into many of the internal cavities of the body. This liquid consists of serum and urate of soda, with sometimes a little urate of lime. In the course of time the serous particles become absorbed, leaving a kind of soft clayey residuum, which afterwards becomes hard and friable; thus forming the so-called tophaceous concretions or chalk-stones.

Gout may be regarded as a specific inflammation which seems to affect the serous and fibrous structures. Accordingly, we find that the above depositions most generally take place in the cavities of joints, in the bursæ mucosæ, in the ligaments, neighboring aponeuroses and cellular membrane, and in the periosteum. They have even sometimes been met with between the cutis and cuticle.

The effusion from which these concretions are derived, occurs not only during fits of gout, but likewise in the intervals; and as the extremities of the body, particularly the hands and feet, are the principal seat of the disease, it is there that the greatest accumulations take place. They occasionally, however, make their appearance about the articulations of the jaw and spine.

Although this process is usually preceded and accompanied by inflammation, yet there is no extravasation of coagulable lymph, no new covering or cyst surrounding the concrete matter,—like pus in an abscess. A circumstance which distinctly proves that the inflammation is not of a plegmonous character, and that the non-absorption of the deposit is to be ascribed to physical causes.

Gouty tophus is not confined to man; it occurs also, though more rarely, in animals, when placed in a similar condition, that is, when fed for a length of time upon a highly azotised diet. Aldrovandi has detailed its effects in birds of prey, more especially in hawks. Gout-stones sometimes attain a very great size. Now, says Dr. Ure,]

Since one part of urate of soda requires about 4000 parts of water to dissolve it, it may be reasonably assumed that the refractory nature of the above deposits is due to their very sparing solubility in the fluids with which they come in contact. It therefore occurred to me as a consequence deduced from some researches into the composition of the renal secretion in certain of the lower animals, that some means might be devised to enable us through the medium of the circulation so to modify that secretion in man as to supersede, for a time, the urates altogether.

The graminivorous animals, as the horse and cow, secrete from the kidneys a peculiar acid, (the hippuric.) It is present in their urine combined with soda. Now, the hippurate of soda, which may be considered the analogue of the basis of gout-stones, is an exceedingly soluble salt, (requiring only two parts of water, at 60° F., to dissolve one,) as are likewise the hippurates of potash, of ammonia, and of lime. Hence it appeared probable that were we to adopt such therapeutic measures as would determine the human kidney to secrete this acid instead of the uric, we should thereby, in all likelihood, control and prevent the deposition in question.

I ascertained in the course of last summer, by repeated experiments, made first of all upon myself, and afterwards upon individuals laboring under gout, that the above substitution could be perfectly accomplished without the slightest risk of affecting the general health, or of irritating the urinary organs. The substance employed for this purpose was the benzoic acid. If an hour after a meal, a scruple of this acid be taken into the stomach, in the course of a couple of hours subsequently the urine voided, amounting to five or six ounces, will be found, on adding a small quantity of muriatic acid, to yield a copious precipitate of beautiful rose-pink acicular crystals, which weigh, after being allowed to settle for a day, about fifteen grains. This quantity is by atomic computation equivalent to little more than one-half of the benzoic acid expended, so that the remainder must have made its escape by some other emunctory, probably the skin.

The above crystals, when examined by the microscope, display the characteristic form of the hippuric acid, namely, a four-sided prism, with a dihedral summit.

It may be observed, that no trace whatever of uric acid, or of any of its salts, or of benzoic acid, could be discovered in the above urine.

A nearly analogous result is obtained when benzoate of ammonia or of potash is administered; and, under particular circumstances, the exhibition of one or other will be found preferable to the simple acid; either in the neutral state, or with an excess of base, when there is a disposition to acescence in the *primæ viæ*; apportioning the dose, in every instance, to the condition of the urinary secretion, previously ascertained by analysis.

By this singular interchange of elements, capable of being effected only by the aid of vital chemistry, we have an organic acid, containing eight atoms of azote and ten of carbon, replaced by one containing no less than eighteen of carbon and only two of azote, and that even in what various eminent pathologists regard as a highly azotised state of the system.

It is obvious that this new plan of treatment, which does not interfere with other remedial means, must be steadily persevered in for a considerable length of time, ere any adequate benefit can ensue. How far it may be applicable to various forms of calculous disease, connected with the gouty diathesis, remains for future investigation to decide. Most unequivocal proofs have already been afforded me, of its efficacy in correcting and removing certain disordered states of the urine in individuals prone to attacks of gravel.

Delirium connected with certain States of the Heart in Fever.

BY DR. HUDSON, OF NAVAN.

[Dr. Hudson has lately published some observations in our Dublin contemporary on this subject. In 1840 a putrid or spotted fever prevailed in Navan and neighborhood, and was very fatal. Generally the symptoms of debility were so prominent that wine and opium were necessary; but in several instances the low muttering delirium changed into that of a furious character, and ultimately into coma, on the exhibition of a small dose of opium. This led our author to make some inquiries into the conditions under which these phenomena occurred. An observation of Dr. Stokes led the way in this inquiry. 'In the diminished impulse, and in the feebleness or extinction of the first sound, we have a new, direct, and important indication for the use of wine in typhus fever.' Dr. H. says that every day's experience increases his confidence in the value of this mode of diagnosis—and he thinks that wine should never be given in the absence of the above symptom. But the rule for the exhibition of opium has not been laid down so accurately by authors.]

Numerous observations have led me to conclude that opium agrees with that state of the cerebral circulation with which wine agrees, and *vice versâ*, and that the indications derived from the signs of the heart are the same, and of equal value with reference to both. I have already stated that in several instances bad effects seemed to follow the exhibition of opium and tartar emetic. A little observation showed that the same conditions were present which caused wine to disagree, and conversely, that those in which opium produced the best effects were precisely the same as those in which wine, freely administered, did good. In one of these cases the patient took, before sleep could be procured, a drachm and a half of the acetum opii, with six grains of tartar emetic, in divided doses, and with the best effect, while in another, a single dose of six drops of the same preparation, combined, also, with the antimony, was followed by loss of speech and power of deglutition, tetanic rigidity of the muscles, coma, and death in rapid succession. Here were two opposite conditions of the system in the same disease. The states of the cerebral circulation, in particular, must have been different; but by what external character were these to be recognized? Those which appeared upon the external examination of the patients, in the several instances of each class, were, in the first, the signs of a feeble heart, viz., the loss of impulse and diminution or absence of its first sound; in the second, strong impulse, and distinct and loud sounds.

A corresponding difference of the appearances on dissection was found. In those who during life had manifested the signs of a feeble heart, this organ was softened, and the morbid appearances of the brain were those of venous congestion; in the others, the heart was firm and contracted, and the arteries of the brain were injected. A little consideration will show that the conclusion to which these observations would lead as to the connection between the opposite state of the heart and corresponding states of the cerebral circulation, is consistent with the pathology of the latter affections, and might, to a certain extent, be anticipated by reasoning; for, admitting the truth of the proposition that 'the pathology of the brain is, in many instances, intimately connected with, and dependent upon the pathology of the heart,'* we would, reasoning *a priori*, infer that cerebral excitement, attended with increased strength and activity of the central organ of the circulation, should be found to depend upon a sthenic or arterial congestion, while a feeble state of the propelling power would lead to more or less stagnation in the venous current, and congestion in those vessels with, what always co-exists with such congestions, *a diminished supply of arterial blood*—this last condition being, in all probability, the true cause of the physiological effects of venous congestion of the brain.

We would thus suppose the existence of two opposite pathological states of the brain, requiring opposite treatment, and yet possessing external characters and symptoms having so close a resemblance as to require frequently more than ordinary powers of discrimination to distinguish between them.

Such a supposition is consistent with the analogy of other affections, especially of 'delirium tremens.' Of this disease every practitioner recognizes at least two varieties, one of which is controlled by opium, with the precision and certainty of a specific; while another case, differing so little in its external characters as to be frequently confounded with it, is exasperated and rendered fatal by this medicine. One requires stimulants, the other bleeding and purging. Dissection reveals passive venous congestion in one case, and determination of blood to the brain or membranes in the other.—*Lond. Med. Chir. Rev,*

Treatment of Injured Intestine from a Blow upon a Hernial Sac.

BY C. ASTON KEY, ESQ.

[Mr. Key, relates in a late number of the *Guy's Hospital Reports*, several interesting cases illustrative of the nature and treatment of this accident.]

The extent of injury which the intestine sustains will vary according to the violence of the blow. The contusion may be insufficient to burst the bowel, or to occasion such a lesion of tissue as shall end in gangrene, its effects being only inflammation of the coats of the intestine; or the violence may be such as at once to rupture the intestine; or, failing to rupture the bowel, the contusion may be so severe as to be followed by sloughing and escape of fæces. These three states require distinct consideration, as the treatment required for each necessarily varies.

The mildest form of injury which a blow inflicts on a hernia is analagous to the contusion of other soft parts. The smaller vessels of the mucous and other tissues being ruptured, pour their contents into the reticular membrane, and thus gorge it with extravasated fluids. Such contusions, it is probable, are not followed by any serious consequences: the fluids will be quickly absorbed, the mucous lining and the serous covering of the bowel remaining free from inflammation: neither will there be any symptom to lead to the suspicion that the bowel has suffered, beyond a certain degree of inaction in the muscular coat, giving rise to temporary constipation. Collapse, vomiting, and abdominal tension, are wanting, to give a character of severity to the injury.

---

* Dr. Law on Disease of the Brain dependent on Disease of the Heart, Dublin Medical Journal, No. 50.

The two first indications that immediately force themselves on the surgeon's attention, are, the necessity of returning the contents of the hernial sac, and obtaining free evacuations from the bowels. To the former of these proceedings there can be no objection, as the vitality of the bowel is scarcely endangered: and if it were left in the sac, adhesion might form between the injured bowel and peritoneum, that would afterwards interfere with its return into the abdomen. The administration of purgatives ought to be wholly abstained from, notwithstanding the confined state of bowels usually consequent upon an accident of this nature. A bruised bowel is placed by nature in a state of rest: the exhaustion of the nervous energy of the part diminishes in the muscular tissue the disposition to contract. Such inactivity of the bowel should be encouragad, and not thwarted by irritating purgatives. The safety of the bowel depends on the non-occurrence of inflammation; but if, by undue interference, the bruised structure is hurried into a state of inflammation, sloughing or ulceration will probably be the result. Beyond an occasional enema, to unload the larger intestines, nothing need be done. Opium may be required, if pain come on, indicating peritonitis; and if joined with calomel, care should be taken that the action of the former should preponderate, in order to prevent the probability of stimulating the bowel. Food should also be given in the smallest qnantity, and in a fluid form, that little or no feculent residue may remain, to oppress the part. In this respect, nature is our guide: vomiting, which usually ensues immediately after the accident, empties the upper part of the canal; and the little desire that the patient feels for food, prevents, if nature be allowed her own way, any chance of repletion. Thus the part is placed in a state of repose; and the circulation soon regaining its healthy condition, the functions of the intestine are restored.

The necessity for repose in an injured state of bowel it would be well to bear in mind, after the operation of strangulated hernia. The bowel is gorged by the strangulation, bruised by the taxis as it is too often practised, or inflamed by long incarceration in the sac. An intestine in such a condition cannot but be injured by an early administration of purgatives, which irritate and inflame the bowel, or exhaust what little remains of vital energy. After the operation, some time for repose should be allowed, before the bowel is called into action: the surgeon's anxiety to procure stools, should yield to the evident necessity for time being allowed for the restoration of the natural powers of the injured bowel.

If the contusion be so severe as to destroy the vitality of the bowel without rupturing it, the condition of the patient, both immediately after the accident and for several days subsequently, sufficiently attests the severity of the lesion which the part has sustained. The hernial sac is usually found filled with the injured bowel; but the absence of distension serves to distinguish it from a state of strangulation. The integuments appear to be bruised, though sometimes but slightly. The part is very tender when handled, but feels soft and pliant; and very moderate pressure is sufficient to reduce the contents of the sac.

The shock which the nervous system receives, is followed by a feebleness of the circulation, a corresponding pallor of the whole surface, and a sense of syncope. This condition is however only transient: re-action almost immediately ensues; the patient passing from the state of collapse, and gradually rising into a state of inflammatory excitement, as the injured bowel becomes the seat of more or less inflammation.

The speedy recovery of the patient from a state of collapse, quickly dissipates the suspicion of a rupture of the intestine; and the surgeon usually endeavors to replace the contents of the hernial sac as soon as re-action takes place. To this proceeding there is no objection, if it be done with gentleness. The danger of abdominal extravasation will not be increased by replacing the injured bowel at the neck of the sac: for should sloughing of its coats ensue, the slough may be walled in by adhesion of the surrounding peritoneum, aud fecal extravasation be prevented; or, should this salutary process of adhesion fail to insulate the slough, the sac will receive the fecal matter, and quickly give intelligence of the impending mischief, by the tumefaction that will ensue within the scrotum.

The symptoms that arise in this state of things, in some points, resemble those of a strangulated bowel. The rejection of food from the stomach, the difficulty of obtaining stools, the tense and tender belly, and the swollen state of the scrotum, all lead to the impression that a portion of the intestine has passed down through the rings, and has become incarcerated.

[Mr. Key then brings forward several interesting cases, to show the treatment he adopted when the intestine had been injured, and where escape of the fæces into the peritoneal sac was apprehended. In the first case, the man had received a blow upon the pad of his truss, which he wore for a reducible scrotal hernia. Violent symptoms came on, and Mr. Key ultimately opened the sac, in which he found neither intestine nor omentum, but which contained a firm, fibrous deposit, which adhered to the serous surface of the sac, and also extended upwards into the neck of the sac, so as to close all communication with the abdominal cavity. The man experienced no relief for three days, when a copious discharge of fluid fæces from the sac took place, and the urgent symptoms soon subsided; the fæces continuing to pass freely for four days, when natural defecation took place, and granulations soon closed the intestinal opening. In the second case, the man received a violent blow upon his hernia, which was followed by such severe symptoms, that Mr. Key concluded the bowel had been severely injured; and for fear of fecal extravasation into the peritoneal cavity, he determined on opening the sac, as in the former case, with the view of affording an exit to the contents of the sac, if the fæces should have escaped into it.

On the fourth day after the operation, fæces escaped by the wound, and entirely relieved the patient. On the seventh day, the fæces passed by the rectum, although they still continued to pass through the wound for five or six weeks afterwards; when ultimately the part completely healed, and the man was dismissed quite cured.

Other cases are related of a somewhat similar kind, which occurred many years ago, which proved fatal; and in which no such attempt by operation to relieve fæcal extravasation had been made; although the post-mortem appearances would have warranted a similar operation. Mr. Key then goes on to say:]

The results of the foregoing cases, together with the remarks that I have appended to them, may not be without some use, in drawing the attention of surgeons to the danger attendant upon these accidents, and to the possibility of rescuing the patient, by a timely operation, from the necessarily fatal consequences of fecal extravasation into the cavity of the abdomen. To distinguish between the three degrees of injury to the bowel that I have ventured to suggest as the ordinary effects of blows upon a hernial sac, does not appear to be difficult, if due examination be made of the parts injured—if the exact seat of injury be carefully ascertained—and if care be taken to draw correct information from the facts as they present themselves.

It does not appear that persons are always aware of being the subjects of hernial protrusion: some, from carelessness, failing to notice the existence of a rupture; and, others, from design, concealing their knowledge of the circumstance, when closely questioned as to enlargement at the rings. In two of the cases related, the patients did not seem to have been aware of any hernial swelling before receiving the blow. The history therefore of these cases, given by the patients, cannot be wholly relied upon. Their ignorance of the fact is not to be taken as evidence of a rupture not having existed previously to the blow: and it is of no little importance to establish the existence of a hernia; as without it, a rupture of the bowel is in the highest degree improbable, by a blow received upon the pelvis, or scrotum, or even upon the inguinal canal. Careful examination of the abdominal rings, and of the canal, can alone decide the absence or presence of a hernia, and establish the probability, or otherwise, of the bowel being ruptured, so far as the existence of a hernia may favor it.

It may be urged, that the symptoms following upon a bruised intestine, or even upon a contusion of the testicle, may closely simulate those of a ruptured bowel. After these injuries, pains of a severe kind are felt about the scrotum and groin; the parts cannot endure rough handling, and vomiting sometimes follows, but these symptoms are transient; the shock passes away, and re-action ensues. The peculiar distress of countenance characteristic of ruptured bowel is wanting in the less severe injuries of these parts; and it is only the continued and increased urgency of symptoms that fail to be relieved by the mild means resorted to, that should induce a surgeon to take the more serious view of the injury.

The period and manner in which the signs of lesion to the bowel show themselves, will serve sufficiently to point out to the surgeon the course which he is to adopt. The unnecessary exposure of a hernial sac and its contents is as much to be avoided, as delay is to be deprecated when extravasation of feculent matter is taking place. The former, however, is far the lesser evil; as experience shows that, in cases erroneously supposed to be strangulated hernia, the operation of opening the sac has been productive of no mischief. It is not likely that a surgeon, without ordinary discretion and knowledge, will be liable to mistake a mere external contusion, be it ever so severe, for a burst or injured bowel; nor will he be under any embarrassment how to proceed under the varieties of lesion to which the bowel is subject. The interval of ease that sometimes follows the blow, will not be taken as evidence of the bowel having received no lesson; for it seems, that until the peritoneum suffers from the presence of irritating matter, liquid or gaseous, upon its surface, the constitution does not take alarm. In the most severe injuries, when the rent in the bowel is extensive, and the fecal effusion almost instantaneous, the symptoms at once assume a character too marked to be mistaken; and the only mode of affording relief, namely, that of at once opening the hernial sac, is obviously pointed out. When the opening is so small, as to prevent, for a time, any escape of the contents of the intestine, there is no necessity for any decisive step being taken, until called for by the unequivocal collapse and pain that attends extravasation. The interval of ease may lull for a time all suspicion as to the occurrence of rupture; but when extravasation begins, and not before, the surgeon's interference is called for; and no time should then be lost in affording an outlet to the offending fluids.

Excision of Diseased Ovaries.

[Dr. Watson, of London, thus describes in a lecture recently delivered, a modification of the process of excision of diseased ovaries—whereby it is adapted to certain forms or conditions of the disease—has been proposed and practised; and holds out somewhat more of promise.]

It consists in making, not a long, but a small incision through the walls of the abdomen, and through the peritoneum, so as to bring the surface of the diseased ovary into view. The cyst is then secured, by means of a tenaculum, or of a ligature, from receding inwards, and punctured, and its contents are suffered to escape. When the sac has emptied itself, it is withdrawn through the external orifice by gentle traction, until its stalk, or place of attachment to the broad ligament, comes near the wound. A thread is tied round this stalk, the cyst is cut off, the uterine appendages are put back into the cavit of the abdomen, and the lips of the wound are brought together.

Although this method does not appear to have been actually performed till very recently, it had been suggested as long ago, at least, as the time of Dr. William Hunter, who, in a paper on the disease, has these remarks. 'If it he proposed, indeed, to make such a wound in the belly as will admit only two fingers or so, and then to tap the bag, and draw it out, so as to bring its root or peduncle close to the wound of the belly, that the surgeon may cut it without introducing his hand, surely in a case otherwise so desperate, it might be advisable to do it, could we before hand know that the circumstances would admit of that treatment.'

In these few sentences, Dr. William Hunter not only described the mode of excision, but alludes to circumstances that may render it inadmissible, as well as to the uncertainty that may arise about the existence of those circumstances. What the circumstances are is sufficiently obvious.

However, this suggestion has been carried into successful practice by Mr. West, Mr. King, and others. To an interesting paper on the subject, published by Mr. Gorham, in the Lancet, is appended a summary account of ten cases; by which account it appears, that five of the ten patients were cured by the operation; two recovered from the attempt to extract, which was unsuccessful; two died very soon after the operation, and evidently in consequence of it. The remaining patient, whose case has already been adverted to, recovered also from the incision; but there was no diseased ovary to amputate: so fallacious, sometimes, is the diagnosis.

This mode of operating merits careful consideration, and further trial. Its recommendations are—

1. That the first steps—the incision and the puncture—are the same in kind as the first steps in ordinary paracentesis, and not much more severe or dangerous; the only difference being that the incision requires to be somewhat larger in the one case than in the other.

2. That, when successful, it affords a complete and permanent cure, which can hardly be hoped for from any other plan.

The objections to its general use are—

1. That the single sacs, with thin and flexible walls, do not, commonly, reach a very large size. When small, or of moderate dimensions, they produce so little distress or inconvenience, that an operation, which must always be uncertain and tentative, ought not to be recommended.

2. That the multilocular tumors, with solid walls and partitions, can scarcely be so drawn through the opening made into the abdomen.

3. And above all, that adhesion of the tumor of the neighboring parts would interfere with and prevent the success of the operation.

In most, however, of the five cases of cure referred to by Mr. Gorham, the sacs thus removed were large. From one of them 12 pints of fluid were let out; from another, 27 pints; from a third, upwards of 20; and from a fourth, 24 pints.

It is difficult to guess beforehand whether the tumor be attached to the parts surrounding it or no. If it be readily moveable by the fingers applied to the surface of the belly, so as to admit of being pushed hither and thither, without pain or distress to the patient, it is probably unadherent. In one of the same five cases, the patient being in labor, Mr. West found that the tumor lay between the uterus and the brim of the pelvis. By gentle pressure, per vaginam, it was made to recede into the cavity of the abdomen This afforded a presumption that it was free from adhesion; accordingly the sac was afterwards easily excised. The tumor is attached anteriorly to the peritoneum lining the front of the abdomen more frequently than to any other part. This Mr. Gorham attributes to partial inflammation produced by the puncture in the operation of tapping; hence the presumption that the cyst is loose is, *cæteris paribus*, the stronger, when paracentesis has never been performed.

If this mode of excision should be thought advisable, it ought to be attempted while the tumor is yet of moderate bulk, before the peritoneum has been much stretched, and while the chance of adhesion is the least.—*London Medical Gazette.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, November 12, 1842.

Our readers will perceive, from our report of the proceedings at the City Hospital on last Saturday, that the good-humored and wholesome criticism to which Dr. Buck's operation was subjected in our last number, has not been without a good effect. We can already see our anticipations respecting the beneficial tendency of the new movement in the management of that Hospital, beginning to be realized. The medical attendants are now sensible that the eye of the profession and the public is upon them, and both they and their patients will feel the salutary influence of that impartial supervision. A public charity, with doors closed against the press, and the profession, is a monstrous thing indeed.

So novel, however, in this atmosphere, is the work of criticising the doings of Hospital Surgeons, that our review of Dr. Buck's proceedings, has in reality created a considerable sensation. Amongst the little knot of doctors attached to the Hospital, and their friends, there has been quite a ferment,—a very respectable 'tempest in a tea-pot.' Dr. Lee has come in very unjustly for his share of censure. But had not he, with every one of the spectators, a right to express his opinion of the propriety of the operation, and the dexterity or success with which it was performed? Certainly. And were not Dr. Lee's remarks conveyed in respectful and moderate language? By-the-by, our readers will remember that we stated that we were indebted to *several* respectable and competent sources for the report of the whole affair, and we added a number of our own remarks, which were suggested by the account which we received. It is not necessary to add that to us alone attaches, all the responsibility incurred by the article in question.

Several members of the profession here, and Dr. Lee amongst them, have been terribly frightened by some of our remarks and hints in our last number. The fact is, the New York doctors are so addicted to intrigue and double-dealing, and all the petty arts of *cliquerie*, that they are afraid to move for fear of knocking their heads, against some unseen instrument of fracture and annihilation. They live in a perpetual dread of offending this man or that,—of incurring the suspicion of the schools,—of treading on the toes of a brother practitioner who may possess any influence. It is something like the 'Reign of Terror.' Who knows when he may be 'denounced?' The consequences are easily imagined. Quarrels, jealousies, backbitings, sly whispers, knowing shakes of the head, and all the pantomime of envy and malice, afraid to speak or to strike. The moment that any man exhibits the slightest disposition to express his sentiments in public, without fear and in the spirit of a man, he is pounced upon, and ten to one he is either forced to fall back into the ranks of quiet adherence to some wealthy, influential, loggerheaded practitioner, or to leave the city.

Now how is this deplorable state of things to be remedied? Let all members of the profession, who have a spark of manliness left, unite in opposition to the miserable spirit of sycophancy and dependance which has so greatly hindered the progress of science amongst us,—which has interposed obstacles without number in the way of every improvement,—checked every generous effort,—and crushed so many of the most promising followers of our art.

Dr. Nelson delivered his first lecture, at the Lyceum, Broadway, on Tuesday evening last, in the presence of a highly respectable audience. Dr. Nelson modestly and succinctly described the course adopted by him in his researches, which had been to commence with the very lowest order of beings in the animal kingdom, and gradually ascend, without omitting one link in the chain which connected them with man, the last and most highly finished work of creation. Dr. Nelson pointed out with great felicity, and in a spirit of good humor and candor, a number of blunders into which writers on physiology have fallen, and which have led to many serious errors in the treatment of disease. He then presented a hasty outline of his intended lectures, by mentioning a series of doctrines commonly received by the medical world, but which the result of his researches would be shown to overturn. The originality of the doctor's views, as thus announced, appeared to excite very great interest.

We can confidently assert, that Dr. Nelson's lectures will be the most erudite, profound, and important series ever delivered in this city. Surely, if any man can elucidate a scientific subject, it is he who has devoted to its study the labor of a life,—a keen and practised judgment,—indefatigable industry,—a mind which never rests satisfied without proof,—and reasoning powers trained in the detection of sophistry, and the perception of the truth.

Physiology is a science whose importance needs no exposition now-a-days. It is becoming a fashionable study. But the majority of its expounders, and without exception its popular retailers, have been rather deficient in knowledge of the subject they professed to teach. We cordially recommend such gentlemen to attend Dr. Nelson's discourses. From the sensation already made in the medical circles here, we know that no invitation to embrace the opportunity now offered of obtaining acquaintance with the theories, views, and discoveries of one of the most remarkable medical men of the age, can be needed.

Dr. O'Regan, a gentleman who has been connected for a considerable time with one of the best anatomical schools in Dublin, has, we understand, made arrangements for superintending the private studies of young men preparing for examination. We can add our own certificate of Dr. O'Regan's high attainments, to the numerous testimonials which he received from the most distinguished Professors in the Dublin schools. In our opinion, and which ought to have more weight, in that of several of the most respectable members of the profession here, with whom Dr. O'Regan has become acquainted since his arrival, an opportunity is now afforded to medical students, such as has rarely hitherto been within their reach, of acquiring the assistance of a competent private instructor. Dr. O'Regan's terms are, we are informed, very moderate; and that is of some importance to students, considering the large amount of fees extracted from them by the schools. We will cheerfully afford any information which may be desired respecting this course of private instruction.

We direct the attention of students to Dr. Westmacott's advertisement. The art of anatomical and pathological drawing is one of vast importance, and has been too much neglected. Dr. Westmacott is very competent to teach this branch, and we wish him the success that he merits.

Lectures on the Theory and Practice of Physic. By William Stokes, M. D., Lecturer in the Medical School, Park street, Dublin; Physician to the Meath Hospital, etc., etc.; and by John Bell, M. D., Lecturer on Materia Medica and Therapeutics. Second Edition. In two volumes. New York: J. & H. G. Langley.

We have just received from the Messrs. Langley, of this city, a copy of this invaluable work. In our next we will notice it at such length as our space will permit, and in the meantime commend it to the notice of the profession.

Braithwaite's Retrospect of Medicine and Surgery. American Edition. New York: Adee & Estabrook, Tribune Buildings.

In issuing this neatly got up reprint, the publishers have conferred an inestimable service on the profession on this side of the Atlantic. We do not know any medical periodical publication so useful and interesting as Mr. Braithwaite's 'Retrospect.' Every practitioner should endeavor to take the work, and so every one can, now that it is offered at so low a price.

Claims of the Missionary Enterprise on the Medical Profession. By Daniel J. Macgowan, M. D.

This is an eloquent and animating discourse, breathing throughout the purest spirit of Christian philanthropy. It was delivered before the Temperance Society of the College of Physicians and Surgeons in this city,—an association which we most cordially bid 'God-speed!'

THE MEDICO-CHIRURGICAL REPORTER.

Paralysis of the Face, successfully treated with Strychnine.

BY B. F. JOSLIN, M. D., OF NEW YORK.

I have employed strychnine in two cases of paralysis of the muscles, supplied by the portio dura, called by Bell the respiratory nerve of the face. Though this affection does not endanger life, it is extremely inconvenient, and occasions great deformity. One of these cases differed in some respects from any which I have met with in books. It was an uncomplicated paralysis of the portio dura on both sides. In the numerous cases given in the appendix to Sir Charles Bell's elaborate work on the nerves, there is but one case of paralysis of both sides of the face, and in that the affection of the portio dura was complicated with that of other nerves. Paralysis on one side of the face has been frequently observed; and although many cases have yielded to depletion, counter-irritation, or mercury, others have obstinately resisted these older remedies. Strychnine has of late been employed with advantage; but the modes and laws of its action seem to have been but imperfectly investigated. The following cases may contribute something to the stock of observations necessary to elucidate these subjects, whilst at the same time they corroborate the physiological doctrines of Bell, in regard to the functions of this nerve, as having no influence in sensation and as being the common source of power to all the muscles of expression, whilst the branches of the fifth pair supply the muscles of mastication, and confer common sensibility.

Case I.—*Paralysis of both sides of the face*—April 17th, 1840.—A young man, W. H. L., had been for the last four days unable to shut his mouth, except by means of his fingers, or by the impulse of the air against them during a forced inspiration. This was the defect which appeared to give him most concern, as it affected his speech. Of course, he could articulate no words containing labial letters. From this circumstance, and the expression—or rather total want of expression—of his face, I immediately perceived that there was a paralysis of all the muscles of the face which were supplied by the portio dura. Those supplied exclusively by other nerves were wholly unaffected. He had perfect control of the tongue and of the masseter, temporal, and other muscles specially appropriated to mastication. Still one difficulty existed in this operation, viz. an inability to keep the food properly between the teeth. This was to be anticipated, inasmuch as the buccinator, employed in this office, is also connected with the function of respiration. The patient was wholly incapable of smiling or frowning, or closing the eyelids, from paralysis of the zygomatici, corrugator supercilii, orbicularis palpebrarum, &c. When I requested him to close his eyes, the lower lid did not rise at all, but the eyeball rolled extensively upward under the upper lid, which descended a little, when I requested him to direct the eyes steadily toward me. Whilst attempting to shut them, he found it impossible to cover the cornea.

As the paralysis affected both sides of the face, but did not extend beyond it, I inferred that the disease had originated neither at the origin nor in the course of the nerve, but at its organic extremities, and probably in consequence of an application of lead to the mouth. The patient's answer to an inquiry on this point, tended to confirm this suspicion. I learned that he was a printer, and had been holding types in his mouth, when at work as a compositor. He had formerly done so, but on learning that printer's types were poisonous, had, until within a short time previous, nearly discontinued the practice. He was at this time perhaps more predisposed to the affection in consequence of some exposure to cold a few days before, and of previous general debility for some months, induced partly by an exhausting hemorrhage from the leg.

Treatment.—A cathartic was directed, and the application of tincture of strychnine to the cuticle of the face—about one drachm of a solution containing about three grains of strychnine, to an ounce of alcohol, was applied to each side three times a day, and the absorption assisted by friction. This lotion sometimes produced a little twitching of the muscles, fifteen or twenty minutes after its application; and under its use the muscles of the face completely recovered their power in two or two and a half months. At the end of one month, the application to the left cheek was discontinued, as the muscles on that side had completely recovered. On the opposite side, the corrugator supercilii and muscles of the mouth were more benefitted by the first month's treatment, than the orbicularis palpebrarum. For complete recovery, this side required at least twice as much time as the opposite side of the face.

Case II.—*Paralysis of one side of the face.*—Mrs. H., aged about forty-five, became suddenly affected with great distortion of the face, some time in March, 1840. The paralysis had been, during three wacks, preceded by pains on the same side of the face, and, on some previous occasions, pain in the corresponding ear. The patient was not seen by me till the 28th of May. There appeared to have been no tendency to a spontaneous recovery of power by the paralyzed muscles. The sensibility of the parts had not been affected.

Symptoms and Pathology.—In this case of paralysis of one side of the face without loss of sensibility, the affection, as in the former case, was entirely confined to the muscles of expression. Here it involved only those on the right side of the face. The opposite angle of the mouth was drawn up, always half an inch, frequently three-fourths above that of the affected side, but to a much greater distance in the actual direction of the displacement, i. e., upwards and to the left. The patient, on being asked whether she could close the right eye, seemed incapable of deciding, but made the attempt, and then asked whether it was shut. The reason of her uncertainty was obvious. The pupil was turned up under the upper lid, which was not depressed, but left the sclerotica exposed. This evinced paralysis of those branches of the portio dura which supply the muscles of the eyelids, as the obliquity of the mouth had of those which supply its muscles. She complained that the eye was irritable, and the lachrymal secretion increased. This was evidently a consequence of the eyeball's exposure to the air, and another evidence of the paralysis of the muscles.

To test the paralysis of the buccinator, I requested the patient to blow. During the attempt, the cheek of the affected side was puffed out into a hemispherical shape, whilst the other side, in which the buccinator retained its activity, remained comparatively flat. I find this can be imitated by a voluntary effort. We can cause one buccinator to resist the pressure of the internal air, and allow the other to yield passively to the distending force. When the buccinator is seen tense, this is no evidence of its activity. On the contrary, with a given pressure of the air, the tension is greatest when the muscular force is reduced to nothing; for then, in consequence of the dilatation of the cheek, the distending force acts upon the greatest surface.

Effects of Strychnine.—On the 29th of May, 1840, about two months after the attack, the treatment with strychnine was commenced. The distortion of the features was great, and, according to the representations of the patient, there had been no amendment during this time. I directed the internal administration in doses of one-sixteenth of a grain, morning and evening. The effect of that taken on going to bed, was manifested in a few minutes; that in the morning produced no sensible contractions. It is a fact of some interest, that this agent is not only determined specially to the muscles, but the effect is chiefly manifest in the muscles of the affected side. This I had learned in a previous case. But it would be interesting to know whether, in a partial paralysis, the healthy or unaffected muscles of the affected side are more liable to the influence of the strychnine than those of the opposite side of the body. The facts of this case favor the affirmative. The action of the medicine was manifested by a sense of drawing in the muscles. This, during the early part of the treatment, commenced simultaneously in both wrists, and extended progressively up the arms; but on the sound side never so high as the elbow. On the side corresponding to the paralyzed muscles of the face, it extended at first to the upper arm, still later, i. e., on subsequent days, to the neck; whilst as yet its influence on the paralyzed muscles was not manifested by any sensible contractions. About the same time at which these commenced in the affected muscles, they ceased to be reproduced in the healthy muscles, which were not affected with spasmodic contractions during the remainder of the treatment. Thus the sanative influence of the agent seemed to approach by successive steps toward the seat of the disorder, and there to concentrate itself, having first quitted the healthy side of the body, and then those parts of the affected side more remote from the seat of the affection. It never at any time moved the legs.

The external application of strychnine in this case produced but little effect. The complaint, which had been much relieved by a week's internal use, was but little relieved by a continuance of that, by the external application, or by pustulation near the exit of the portio dura with tartrate of antimony. It remained stationary.

After some suspension of treatment, without any spontaneous amendment, the internal use of strychnine was recommended in increased doses on the 21st of July. One-eighth of a grain was administered at bed-time. In about ten minutes it caused a transient action in some of the muscles of the ear. But the most remarkable effect of this dose was a sudden and powerful contraction of the paralyzed muscles of the mouth, thirty-six hours after the administration of the medicine. After the transient contraction of some little muscles of the ear, there was no sensible manifestation of the action of the medicine for thirty-six hours, i. e., till half-past nine of the morning of the second day. But now the patient was astonished to feel the mouth suddenly drawn far to the right, and wondered whether a new and permanent distortion of the face had occurred towards the side opposite the former. A transient distortion had indeed occurred in consequence of an action of the paralyzed muscles, so powerfel as to overbalance that of their healthy antagonists. Two other similar doses, at intervals of two days, produced no manifest contractions.

The above phenomena, and some subsequently observed, suggested some topics for investigation; viz., the length of time during which strychnine acts; the effect of a second dose during this time; and the most advantageous intervals between the repetitions.

On the evening of August 3d, the internal use of the medicine was resumed in the same doses, to be repeated after the same intervals. The first dose produced no manifest contractions. In consequence of the patient's mistaking the directions, the second dose was taken on the very next evening. In about fifteen or twenty minutes it produced strong action near the posterior part of the jaw on both sides. The sensation was represented as resembling that painful sensation near the articulation of the jaw which sometimes attends the act of gaping. About an hour after taking the medicine, the patient having occasion to rise and walk across the room, discovered that the muscles of the feet and legs had nearly lost their power. The next day, however, she had her usual strength, and it was manifest that her face had improved.

In order to prevent the repetition of disagreeable effects, as well as to throw light on the topics above mentioned, I directed the doses to be now repeated at intervals of four days. At some time in the night succeeding the expiration of two days after the next dose, the patient experienced for about five minutes a strong and peculiar cracking sensation of the affected side of the face. She described it as resembling that which might attend a sudden separation of the parts in a straight and vertical line extending from the temple to the base of the jaw. On the next morning, the affected side of the face was considerably œdematous. Suspecting this might be in part the result of the medicine, I determined on a reduction of the dose to one-sixteenth of a grain, still preserving the interval of four days. The first pill was detained in the throat, and was partly dissolved by the saliva before the deglutition was completed. It acted within two or three minutes. The sensation was represented to be in part that of a kind of crepitation, almost wholly confined to the affected side of the head, and comprehending the ears, face and scalp to a considerable extent. Having occasion to rise to attend to an infant an hour and a half after taking this small dose, the patient found her legs quite weak. Next day, however, she felt better than usual. The patient, after taking two more doses of this size, one every fourth evening at bed-time, left town on the 21st of August. Each dose produced within a few minutes, contractions of the muscles on the affected side of the face, but none on the following days. There was a gradual amendment. The eye at that time could be almost perfectly closed. This restoration of the power of the orbicularis muscle had been followed by the removal of that irritability of the eyeball which had been occasioned by its exposure. The deformity of the mouth had been nearly removed. The buccinator had been less affected by the medicine than the other paralyzed muscles, and its action, though improved, was still defective. The treatment with strychnine had been employed about two months, exclusive of one month's intermission. The patient carried with her two dozen strychnine pills, 1-16 grain each, with the use of which the cure was rendered complete.

Remarks on cases compared.—It may tend to throw some light on the mode of action of the above remedy, to state some coincidences observed in the above cases, and in one of hemiplegia treated for a short time, but with less success, during the same year. Here the disease affected the portio dura in common with other nerves, and appeared to be peculiarly sensitive to the therapeutic agency of strychnine; and the improvement produced by it in the functions of this nerve remained for months after the discontinuance of the remedy, and when the limbs, which had received less even of temporary benefit, had totally relapsed into their former helplessness. The transient effect of the medicine occurred in from half an hour to an hour, but on some occasions spontaneously recurred about nine o'clock on the following morning, and at others, about nine o'clock on the morning of the second day, (i. e., thirty-six hours after the administration,) but never at other houss. Thus there is a curious coincidence as to hour of day and interval in this as compared with one of the above cases. Can there be any special tendency in the action of this agent to recur at nine o'clock in the morning, or after twelve or thirty-six hours after its administration, and is its primary action more manifest in the evening?

That the respiratory muscles were influenced by the medicine, was shown by an involuntary cough, and a sneezing which generally occurred simultaneously with the spasmodic contraction of the muscles of the extremities. These last acted chiefly on the affected side.

It is possible that some light may be thrown on the subject of the apparent special determination of the action of strychnine to affected muscles, by some facts noticed in this case. When the spasmodic action came on, whilst the patient was sitting in his chair, with his arm but slightly flexed, and his leg much more flexed, he noticed that at the instant of the spasmodic action, the forearm always became flexed and the leg extended, the latter more powerfully. Why this special influence on the extensors of one limb and the flexors of the other? It will be perceived that the action, both in direction and intensity, had some relation to the previous position; and it was subsequently ascertained, that whether the action in either limb was flexion or extension, depended on its previous position. If much flexed, it became extended, if extended, flexed. Should the same results be observed in other patients, it might, perhaps, enable us to advance one more step in the explanation or generalization of the special influence on paralyzed muscles. The spasmodic contractions are more readily excited in muscles relaxed by paralysis than in those which are in the normal condition. If this special determination of action is due chiefly to previous relaxation, we might expect it to be oftener manifested in the more relaxed than in the more tense condition of the muscles, whether this relaxation had originated in paralysis, position or volition.

It may be proper to state some experiments made on this patient which were suggested by accident, and which have a bearing on some interesting points of the theory of muscular action, if not upon those points of it involved in the above discussion.

The experiments were suggested during the application of powdered strychnine to a portion of the instep, from which the cuticle had been removed. But I will first take this occasion to state, that as a therapeutic experiment, it was unsuccessful. Though the application was made rather freely to the dermis of the anterior part of the ankle and of the top of the foot denuded by successive epispastics, there was no appreciable effect; and I was induced to suspect the endermic method to be inferior both to the internal use and to the cuticular application which some have denominated the intraleptic method.

On a certain day, as I was pouring from a paper the powdered strychnine upon the anterior and upper part of the foot, the paper came accidentally in contact with the sensitive surface of the blistered part, whose sensibility like that of every other part had been unaffected by the disease. The muscles of the limb, over which neither the action of the powder nor the volition of the patient had been for some time able to exercise the slightest control, were instantly called into forcible action by the first contact of the edge of the paper. The foot was thrown upwards, chiefly by the extensors of the leg. The paper was kicked and its contents scattered.

The potency of mechanical irritation is of much less interest than the direction of the motion. On this subject I made repeated experiments on two opposite portions of the surface of the foot, which always resulted in producing a motion towards the irritated part, a motion chiefly due to the extensors and flexors of the leg situated on the thigh, and of course at a great distance from the part directly irritated. Although the patient was incapable of moving the foot by a voluntary effort, it was invariably and involuntarily thrown upward by mechanical irritation applied to the vesicated surface on the upper side, and as invariably drawn downwards and backwards by titillation of the sole or plantar region. Thus, irritation of the surface opposite one of the extensors of the toes, the extensor brevis digitorum pedis, called into action the extensors of the leg, whilst irritation of the surface opposite one of the flexors of the toes, the flexor brevis digitorum pedis, called into action the flexors of the leg.—*Am. Jour. of Med. Sciences.*

THE COLLATERAL SCIENCES.

On Diseases which affect corresponding Parts of the Body in a Symmetrical Manner.

BY WILLIAM BUDD, M. D., OF BRISTOL.

This is a very interesting paper communicated to the Royal Medical and Chirurgical Society, at a late meeting. We will give an analysis of its contents.

The writer begins by stating that his attention was first called to this subject by several cases of rheumatic fever, in which, as the disease passed into a chronic state, corresponding parts of the limbs became affected in *pairs*, in such a manner that the affection of the limbs of one side repeated itself in those of the other, not merely with a general correspondence of situation, but joint for joint, bursa for bursa, sheath for sheath.

These facts occurred to the writer in 1836, at the Middlesex Hospital. Soon after this, having seen M. Bizot's announcement that the atheromatous deposits of arteries are likewise distributed in corresponding arteries in a perfectly symmetrical manner. Dr. Budd began to look out for instances of the same in other diseases. These soon came before him in great number and variety; and in the course of a short time he was enabled to ascertain that in most diseases of the skin—in many diseases of the joints—in the disease of the arteries just alluded to—in the diseases of the eyes, ears, and many other structures—in fact, that in a great number and variety of diseases of constitutional origin, the lesions peculiar to each affect corresponding parts of the body with alterations, whose likeness in form and situation is often of the most singular exactness.

Particular examples of this, taken from a considerable variety of diseases, were exhibited in a series of casts and drawings, laid before the Society in illustration of this paper.

As this fact repeats itself in diseases differing so widely in many other important respects, and especially in the aspect of their lesions, and the nature of the textures involved, the writer infers that it is a fact of high order, and one which is justly entitled to the rank of a *law*.

In order to arrive at the true interpretation of this law, he proceeds to inquire at great length into the nature of the diseases in which it occurs.

The result of this inquiry leads him to divide all diseases of the kind into two principal groups, 1st, Diseases in which the morbid changes depend on fault originating in the solids affected; and 2d, those in which the lesions originate in morbid states of the blood.

As an extreme case and a fit type of changes originating in the former way, Dr. Budd refers to instances of monstrosity, affecting corresponding parts of the body with exactly similar deformities; and many other examples of the same fact, in other forms, are also adduced. The second group is again divided into two others.

The first of these includes diseases in which the morbid state of the blood probably consists in deficiency of natural ingredients: the second, those in which it depends on the presence of morbid matters of special kind in that fluid.

As a distinct example of the former, Dr. Budd cites those cases in which ulceration of the cornea comes on in man and animals fed on substances deficient in nitrogen—ulceration, which almost always affects both eyes in exactly similar manner. The disease named rickets is also mentioned as being probably another case in point.

The second group—that in which the morbid state of the blood depends on the presence of foreign matters of *special* kind in that fluid—includes a much larger number of diseases than either of the others. It is this group which has more especially engaged the writer's attention, and it is made the special subject of the subsequent remarks.

Having entered into a great variety of considerations, in order to prove that all the forms of disease, of which examples are laid before the Society, fall under this description—namely, that all these are diseases which depend on the presence of foreign matters of special kind in the blood, he then proceeds one step further, and endeavors to show, by facts and inferences of various kind, that in each case the morbid matter peculiar to the disease which may be the object of regard is detained in the seat of each individual lesion, and is there held in affinity with the part affected; this being, in fact, the essential condition of the origin of such lesion.

A case of eruption, caused by the internal use of iodide of potassium, and distributed over corresponding parts of the body in patches of exactly similar pattern; the palsy of the wrists, affecting the same group of muscles in each fore-arm, which is caused by the presence and local action of lead absorbed into the system; the detention of madder in the bones, tingeing corresponding bones with the same shade and arrangement of color, while all other textures are entirely free from it, are cases cited as types of the group, and as offering distinct illustrations of both points of the theory maintained by the writer.

In relation to this group, therefore, the law now takes a more specific form, and requires a distinct interpretation. For, according to these views, it is clear that the agency which here determines the lesions to assume a symmetrical arrangement, is, in fact, *that* which determines a given morbid matter in the blood to fix on one particular part in preference to any other of the same structure; so that a given part once affected, the morbid matter not yet locally engaged, is not free to fix on this or that part, however like to the first in outward appearance, but is drawn to that very part, on the opposite side of the body, which is symmetrical with, or analogous to, the first.

And this agency the writer conceives to be the same, in virtue of which, in the ordinary exercise of assimilation, corresponding parts of the body separate from the blood, and appropriate *matters of identical composition and in equal measure;* thus maintaining through life their original likeness in form, composition, and structure.

The writer then remarks, that under this view, the morbid matter of these diseases may be regarded as tests or measures of structural likeness; and calls the attention of the Society to many cases, exhibited in the casts and drawings on the table, in which lesions exactly alike in form and nature, repeated themselves, not only in the same situations in the limbs of the two sides, but *also in corresponding parts of the upper and lower extremities;* thus giving, in deviations from the normal state, much curious and novel illustration of those laws of symmetry and organic analogy, governing the evolution of opposite regions of the frame, which anatomists have already established on other grounds.

Having freely proved the very general prevalence of a law of symmetry in disease, the writer next considers the causes which may interfere with its manifestation. Three very influential causes of this kind are recognized. These are—febrile movement; local injury, or any other cause materially affecting the organic state of a single part, and thereby determining morbid matters in the blood to that part in preference to others; and, lastly, circumstances having presumed relation to the *amount* of any given morbid matter present in the system.

The disturbing influence of these several conditions is illustrated by numerous examples; and it is then remarked, that in effect of these causes of interference, which are so frequently in action, and perhaps of many others less distinct to apprehension, numerous exceptions to the law of symmetry necessarily occur, even in those diseases the most remarkable in general for the constancy and perfectness of its manifestation.

In consideration of the powerful disturbing influence of the condition first mentioned, and by observation of particular cases, the writer has been led to adopt the following proposition:—

That in diseases whose lesions have a tendency to symmetrical arrangement, the symmetry will be more perfect as the disease is more chronic in its progress; more free from febrile movement and local vascular excitement; and, in its course and character, more nearly resembles the ordinary processes of assimilation. And in this the writer finds a very remarkable confirmation of the particular view he has taken of the nature of the agencies concerned, in determining the symmetrical arrangement of the lesion in these cases.

The source, chemical character, and specific nature, of the morbid matters of the diseases treated of, are the next subjects considered; but on these abstruse and difficult topics the writer's speculations become more vague, and are advanced with much less confidence: for these reasons it is impossible to give a correct view of them in an abstract.

After entering at considerable length into this part of the subject, the writer concludes by relating a series of cases illustrating the views developed in the former part of the paper.

On the Application of Mathematics to the Science of Medicine.

[This is a sensible paper on the value of the numerical method in medical research, which lately appeared in our Dublin contemporary. We shall briefly quote an interesting illustration of the satisfactory results of the application of numbers, in medical practice, in the case of a disease, regarding the respective value of the different modes of treating which, it was supposed, nothing definite could be determined.]

During the prevalence of cholera in Limerick, one of the writers of this article was first attached to St. Munchin's Hospital, where he tried every mode of treatment suggested by the profession, with so little apparent success, that he lost all faith in the influence of medicine. In this frame of mind he was transferred to St. Michael's Hospital, where the admissions were very numerous and the mortality alarming. He there found the calomel practice pursued with much more boldness and resolution, than any results he had witnessed could have induced him to adopt. As it was little complicated with the use of opium or any other medicine which could materially interfere with its operation, he determined to become a mere observer of its results for one month, that he might obtain some numerical evidence of the good or evil which at least one powerful remedy was capable of effecting. To arrive at more accurate conclusions, he noted in each case, on admission, the presence or absence of the pulse at the wrist, and took care that the registrar or apothecary did the same whenever he was absent. He also, in conjunction with the other physicians, endeavored to prevent, as much as possible the admission of patients in the mere premonitory stage, which, however, was not always possible. At the termination of the month he found the gross amount of deaths was 47, out of 165 cases, or less than one-third, which was not far away from the general mortality in most countries which had been visited by the disease. He had here a proof that the numerical method, if applied only to the admissions, general treatment, and gross results, could lead to no practical inferences; for as the proportionate mortality in St. Michael's Hospital was nearly the same with the mortality in every other hospital in the kingdom, he could deduce nothing either favorable or unfavorable to the treatment from any comparison. But his inquiry had a closer application, inasmuch as the patients were classified on admission into those not yet in collapse, or who had a perceptible pulse at the wrist, and those in collapse whose pulse was not perceptible. On casting up the tables and ascertaining the amount of mortality in these separate classes, he was perfectly astonished to find, that in the first class, affected with rice-water vomiting, and purging, and suppression of urine, there were only 5 deaths out of 119 cases, while there were 42 deaths out of 46 cases admitted in a state of collapse. He had here at once evidence sufficient to lead to the most certain and confident conclusions. Cholera, so far from being a disease difficult of cure, was obviously more readily and certainly brought under the control of powerful remedies than any other known malady of so formidable a nature, and failures occurred entirely from neglecting to adopt a sufficiently bold and energetic treatment in the early stage; the only one in which the system is susceptible of the action of remedies.

The same method of observation applied to ascertain the extent to which calomel should be employed in cholera, showed that 'salivation was wholly unnecessary for the cure,' and the authors are therefore perfectly warranted to draw the conclusion which they do. 'These imperfect illustrations of the accurate results to which the numerical method may lead in medicine; and above all, in those diseases which have equally baffled the industry of the morbid anatomist, and the speculations of the most philosophic theorist, may suffice in some degree to show what might be accomplished by a perfect and well-considered application of it in the investigation of disease.'—*Dublin Journal of Medical Science.*

Obliteration of the Aorta beyond the Arch.

This is the title of a long and not very interesting paper, in a late number of the 'Edinburgh Medical and Surgical Journal,' by Dr. Cragie, the object of which is to point out two modes in which the aorta may suffer contraction or total occlusion. In the first case, the contraction or obliteration takes place a little below the point where the ductus arteriosus joins the aorta; and Dr. Cragie is inclined to think that this form of the affection is owing to the 'obliterating action which has taken place in the ductus arteriosus, being from some peculiar cause prolonged into the aorta, and there giving rise first to contraction and then to obliteration of its coats.' Subsequently he regards it as 'the result rather of an arrest of development than of positive and active disease,' though, in another part of the paper, he expresses himself as if the lesion were to be regarded as the result of inflammation. This form of contraction or obliteration of the aorta is distinguished from the one about to be noticed, by always occurring at the same point; by being due to some change in the coats of the vessel itself, not produced by external pressure as of a tumor, and by the smallness of the tract along which the lesion extends, which seldom or never exceeds a line.

The second form of constriction is stated to be owing to some 'extrinsic' cause, as a tumor pressing on the vessel, or incurvation of the spine, or the pressure of an aneurism 'formed on the arterial tunics;' and this form most usually takes place in the abdominal aorta, much further down than in the former case. From this last, it is further distinguished by the contraction being much more extensive than in the other, as it may occupy half an inch, an inch, or two inches.

In both these forms of aortal obliteration, the circulation in the lower half of the body is maintained through the lower intercostals, the epigastric and internal mammary arteries, and the circumflex arteries of the ileum.

The author seems to attach great weight to the distinction between the modes of obliteration described above; which distinction, however, so far as regards the occlusion simply, is obviously rather of pathological than of therapeutical interest: and the important conclusion, as it is termed by him, which the author deduces, viz. that the aorta, though at first sight essential to the circulation, may nevertheless be obliterated without fatal results, is shown, by his own paper, to have been known since the year 1643.

ITEMS AND INTELLIGENCE.

The Cliniques

at both Schools are open. No cases of particular importance have been presented during the past week.

New York City Hospital.

On Saturday last, a case of cataract was operated on by Dr. Rodgers, who offered a few remarks relative to the after treatment.

A case of simple fracture of both bones of the leg, which had been very successfully treated by the starched bandage, was exhibited by Dr. Buck. Two cases of inflammation of the testicle were also presented to the notice of the students by the same gentleman, who then spoke at some length on the treatment of this affection, but his remarks need not be repeated here. We considered it quite unnecessary and rather indelicate to keep the persons of those patients exposed during the whole course of his remarks.

A case of phagedenic chancre was also introduced. When Dr. Buck properly reminded the students, in the course of his observations, that in such a case, the exhibition of mercury was of course highly prejudicial, we could not avoid recollecting a poor patient whom we saw in the Hospital some months ago, laboring under a similar affection, who was yet taking calomel and opium!

Dr. Buck then invited the students to accompany him in his visit to the wards, but before leaving the theatre he stated that, 'as the operation which he had performed on the preceding Saturday had been taken in hand by some member of the profession, in a rather unruly way he thought, he (Dr. B.) would take the liberty of saying something about it, although he regarded the criticisms as of very little consequence.' Dr. Buck then gave a history of the case, somewhat in detail, but not differing in substance from that given by us last Saturday. On reflecting on the case, he (Dr. B.) was led to consider the impediment to motion of the joint as existing in the olecranon process in consequence of the inflammation set up after the fracture, or violence at the time of the accident. He supposed that that had been followed by a bony consolidation of the two surfaces, and that if that were removed, the motion of the joint might be restored. The patient was himself anxious to have something done. As excision of the elbow-joint had been successfully performed in fifty or sixty recorded cases, he (Dr. B.) was satisfied of its propriety and safety. Dr. Syme, of Edinburgh, had probably performed the operation more frequently than any other surgeon, and the great majority of his cases had done very well, and been followed by beneficial effects. He (Dr. B.) had himself performed a similar operation, about a twelvemonth since in that hospital, and the case done well, and a very considerable restoration of the motions of the joint had been the result. Even if the operation did not succeed, the man would not be worse off than he was before. All his (Dr. B.'s) colleagues who were present at the consultation, agreed as to its propriety. With regard to the operation itself, it had also been criticised in the article referred to, and evidently by a gentleman who was not much conversant with surgical operations, that was very plain, and of that the students could judge for themselves. He had made his incision with the view of saving as much as possible of the prolongations sent off from the edges of the triceps on either side, and which were continuous with the strong fascia that binds down the muscles on the back of the arm, and so leave a point on which the muscles might afterwards act. The subsequent steps of sawing and chiselling were such as were suggested by the emergencies of the case. The saw could not have been used any further than it was, and no other instrument but a chisel could have been afterwards employed. On inspection of the humerus and olecranon, after the removal of the latter, it was quite evident that bony consolidation had existed. It was true that some force had been used to flex the arm, but it was not very great, and surely he (Dr. B.) was the best judge of that. He did not know what the effect of circumstances might be, but he (Dr. B) had no hesitation in saying that he would have submitted to the same operation had he been the subject of a similar difficulty. Dr. Buck then described the subsequent process of the case. Very violent inflammation had followed, but was subdued by the most vigorous antiphlogistic treatment, and the patient was now doing well.

THE
NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, NOVEMBER 19, 1842. No. 21.

COMMUNICATIONS.

MEDICAL REFORM.

TO THE EDITOR OF THE NEW YORK LANCET.

SIR :—

An attempt to elevate the standard of medical education in this or any other country, is deserving of universal commendation. In Europe, especially in England, this subject has recently elicited very considerable attention. And it would appear from the reform manifestoes, that improvement is much demanded. And if so, of how much more importance is a reform in this country? What but a meagre standard of medical education has given, from one extremity of the country to the other, such a luxuriant growth to empiricism?

I am aware, that the advocacy of visionary, ultra-theoretical, and impracticable opinions of some distinguished members of the profession, has had a great influence in depressing and injuring the confidence of the community in the utility of medical science. In Vermont, the opposite doctrines which have been taught at some of our medical institutions, have served greatly to impair public confidence. To an ultra-depletory course in almost all diseases, inculcated at one of our medical schools, in a few months after a directly opposite scheme succeeded. Opium, capsicum, quinine, and brandy, then became the *ton*. Blood-letting, and the whole catalogue of evacuants, were denounced as not only useless, but dangerous!!

But what has served probably more than any other cause to degrade the profession, has been the lavish manner in which the honors of our medical institutions have been bestowed. I would by no means derogate the highly respectable character of our medical colleges; but the interest of the public, for whose benefit the institutions were chartered, demands the utmost circumspection and caution in the legal exercise of their privileged responsibilities. If a considerable number of those, upon whom the honors of a medical college are conferred, possess no more literary and scientific excellence than prating *charlatans*, an inevitable consequence must be a species of parallelism or equalizing between the empirical and the diplomated practitioners, in the public estimation. In the production of the present state of affairs, a comparison, it is believed, will not exhibit Vermont medical institutions more in fault than their neighbors. Indeed, if we may rely on the recent exposures in New York, on the late medical circular of Kentucky, and on information derived from other sources, the need of reform throughout the Union is obvious.

With discerning medical men, the subject of elevating the standard of medical education, has for a long time been a topic of consideration. Sixteen or seventeen years since, a proposition was made for a convention of delegates, if I mistake not, from the several medical institutions and societies in the States, and a circular issued for the purpose. The project, however, failed. This plan, I think, nevertheless, to be the most feasible of any which I have known suggested. *To be effectual, each or a majority of our medical colleges, must adopt some uniform system. The necessity of the case demands a confederation of our medical institutions.*

By co-operation, the pre-requisites for examination, and the attainments necessary for graduation, can be made uniform. This in itself will rid us of a great inconvenience. The degree of M. D. would then pass at its full value throughout the Union; whereas, at present, a medical diploma from some of our colleges in one State, will neither entitle a person to practice medicine in some of the others, nor even to an examination for that purpose. The adoption of a uniform and elevated standard of medical education, will at once remove this evil, render medical degrees more valuable and desirable, and at the same time enhance the respectability of the profession. These are the principal objects of the contemplated medical reformation in Great Britain.

The surgeon-general of our army deserves well of his country, for rigidily enforcing the law, which requires a strict examination of all candidates for appointment and promotion in the medical department of the army. Of twenty-two applicants, examined for appointment to the medical staff in the year preceding November, 1839, '*only five were found to possess all the qualifications necessary to an appoinment!*'

'It may be,' says Dr. Lawson, 'that we have erected too high a standard of merit,—that too much is exacted from the human intellect; we are not conscious, however, that more has been asked than ordinary talents, a good education, and the actual study of the science of medicine can attain.'

'But to account for the humiliating result of the examination of that and former occasions,' Dr. L. remarks, 'we have only to look at the system of education which now obtains in this country. * * * * * The great multiplication of medical schools in every section of the country, together with the proverbial facilities of becoming licensed practitioners, has so lowered the standard of professional excellence, and so manifestly degraded the medical character of the United States, that *the present system, will be, it is hoped, by a more enlightened opinion, ere long put down.* The interest of the country is so much divided by these various institutions, and the patronage to each is consequently so small, that many of our ablest medical men will not accept places in them; were it practicable, however, for the professors to obtain adequate compensation for their services, it would be impossible to find professional men enough, of talents and attainments, to occupy the several chairs, in the innumerable medical schools in every town, village, and cross-road place throughout our States and Territories.'

This picture of our medical schools is obviously highly colored, and yet it must be admitted to possess a near approximation to truth. Since, however, we have such a number of medical colleges, it is evidently better policy, and more just, to attempt an elevation of their character by a radical and general reform, than to detract from their real merits.

In the earlier period of our medical history, before our medical schools were established, medical men were trained to the profession as an apprentice learned a trade. Under the special eye of their preceptors, they became familiar with clinical practice; but as our colleges have multiplied, this custom has, in a great measure, been abandoned, and the consequence has been an annual influx of licensed practitioners, of whom many have had no opportunity to witness either hospital or country clinical practice to any considerable extent. Accustomed more to hear lectures than to substantial reading, in many instances, they have not acquired those habits of study and reflection so essential to the medical character. In this particular a reform is indispensable. If a man designs to sustain a position more elevated than a mountebank, he must deserve it. In due time the public will always appreciate real merit. To be a good physician, *a man must be a constant student and a constant practitioner.* 'A knowledge of the science of medicine is not, like divinity and law, to be acquired by reading books in a closet, and listening to the reading of a course or two of lectures; it can only be attained by seeing and feeling, in connection with a knowledge acquired from books.' Hence to accomplish any thing permanently useful, a two-fold labor is to be performed: to produce a more elevated standard of education in our medical colleges, and to induce the community of medical practitioners to pursue a more general and thorough course of medical reading and study. To aim simply at augmenting the requirements of medical graduation, can at best but partially remove the evil. Medical graduation ought to be regarded only as *the completion of incubation.* If this have been of a sufficiently elevated character, the graduate is just prepared to profit from experience, reading, and observation. Of what use is experience to the man who is incompetent to deduce correct pathological conclusions from the phenomena of disease? Or of what honor to the profession is the practitioner, who does not keep himself informed of the improvements and medical literature of the day? A thorough medical reform in these particulars will soon elevate the profession in the United States, render it honorable and useful, and untimately reverse the taunting inquiry of the Edinburgh Review. Even now, under all our embarrassments, we can justly retort in the language of the Review: 'In the four quarters of the globe' *who does not* 'read an American book? Or' *does not* 'go to an American play? Or' *does not* 'look at an American painting or statue? What does the world' *not* 'owe to American *physicians and surgeons?*'

J. A. Allen, A. M., M. D.

Middlebury, Vt., October 10th, 1842.

LECTURES.

Lecture on the Pathology and Treatment of PERITONITIS.

BY

DR. WATSON, OF KING'S COLLEGE, LONDON.

Acute inflammation of the peritoneum is characterised by pain in the abdomen, increased on pressure, and attended with fever. But as these symptoms are common to almost all the inflammatory conditions of the parts contained in the abdomen, we must look for more distinctive circumstances. Cullen defines the disease in this manner. 'Pyrexia: dolor abdominis, corpore erecto auctus, absque propriis aliaram phlegmasiarum abdominalium signis.' He concludes that it is the peritoneum simply that is inflamed, when the specific symptoms that indicate inflammation of particular organs are wanting. It is not inflammation of the liver, for there is no pain of the right hypochondrium in particular, increased by lying on the left side; no pain of shoulder, no jaundice, no vomiting perhaps: neither is it inflammation of the bowels or stomach, for there is no disturbed function of the alimentary canal to denote such inflammation.

The pain, Cullen says, is increased if the patient sits up. He might have added, that it is increased also by drawing a long breath, by coughing, sneezing, or straining, and by pressure made with the hand upon the belly. All these circumstances resolve themselves into the same obvious principle; viz., that of pressure aggravating the pain of an inflamed membrane. The erect posture throws the weight of the viscera upon the peritoneum, and tends to stretch parts of it. The pain occasioned by pressure is often excessive; the patient cannot bear even the weight of the bed-clothes. Though the pain is, *at first*, sometimes confined to particular spots, yet it generally soon extends over the whole abdomen; and this is a circumstance of some importance as respects the diagnosis. But *before* the inflammation has become universal, while it is yet restricted to particular spots, the pain is often much increased by pressure made on *other* parts of the abdomen. In truth, in a shut sac of that kind you cannot compress any one part without exercising pressure, indirectly, upon every other part. The patient cannot sit up, nor usually, lie on his side; but remains always upon his back: in which position you will perceive that the pressure made by the viscera upon the peritoneum is a *minimum;* is the least possible. He draws up his legs too. And he lies *still:* for *movements* cause pressure, and therefore pain. The descent of the diaphragm in inspiration presses also upon the membrane: and the patient not only complains of the pain thus produced, but, in order to avoid it, gets into a way of breathing by means of his ribs only. So that, upon *inspection* of the abdomen, it is perceived that, instead of rising and sinking alternately in respiration, it remains motionless. The phenomenon of *thoracic* respiration is a symptom of peritonitis. The breathing is necessarily shallow in these cases, and less air is admitted at each movement of respiration, and, therefore, the number of those movements is increased: the breathing is quick as well as shallow: there are perhaps 40, or even 60 respirations executed in a minute, instead of 18 or 20. When we find a person lying only on his back, with his knees up, breathing in this manner, and complaining of tenderness of the belly on pressure, and feverish withal, we may be tolerably sure (unless that person be an hysterical girl) that the peritoneum is inflamed, whatever else may be the matter.

The pain in peritonitis is generally sharp, cutting, or pricking in its character. And independently of any pressure made from without, or caused by any change of posture, this pain is apt to be much aggravated at intervals. This, when the inflammation is general, is sometimes owing to the passage of flatus along the bowel, partially distending it, and stretching the inflamed membrane; so that here, also, it is virtually *pressure* which augments the pain.

When you explore the abdomen by pressure, take care not to make the examination *unnecessarily* a source of pain. Press first gently, with the open flat hand; and keep your eyes on the patient's face at the same time. You will perceive, by the expression of his features, whether you are hurting him; even before he takes to verbal complaining.

Acute peritonitis generally sets in with well-marked symptoms: sharp rigors, and high fever, with a hard and strong pulse, which very soon becomes frequent, and often becomes feeble, and is sometimes small from the very first. After the disease has continued for a certain time, it is attended with tension and swelling of the belly. The tension and swelling are tympanitic in the earlier stages. You learn this with certainty by mediate percussion. As the disease advances, the enlargement is sometimes occasioned, in part at least, by the effusion of serum: of the presence of which infallible indications may be obtained by the joint employment of the finger and the ear; by palpitation and auscultation; and by noticing the difference, as to the results of percussion, caused by alterations of posture.

When the disease is advancing towards a fatal termination, the abdomen often becomes greatly distended; the pulse is exceedingly frequent and feeble; the countenance (which in all the stages of the disorder is expressive of anxiety) becomes pinched and ghastly; cold sweats ensue; and the patient dies at length by asthenia: death beginning at the heart. The mind is often clear to the very last.

Such is the ordinary course of peritonitis. But other symptoms, which I have not mentioned, do sometimes accompany it; arising out of the peculiar circumstances of different cases. Thus sickness and vomiting may occur: and these symptoms are supposed to denote that the peritoneal covering of the stomach is especially implicated: but I question whether this is always a correct inference. When stranguary happens, which is not uncommon, that part of the membrane which is reflected over a portion of the bladder is probably involved in the mischief. Inflammation of that part of the peritoneum which lies in the immediate vicinity of the kidneys, may cause, Dr. Abercromby thinks, suppression of urine.

Peritonitis is apt to arise under the influence of cold, like other internal phlegmasiæ: especially when cold combined with moisture is applied, under certain conditions, to the surface of the body. It is occasionally produced by mechanical injuries inflicted upon the abdomen. It often prevails epidemically, and produces great mortality, among parturient women: and there is ground for believing that this form of the disorder is propagable, and often propagated, by contagion. Besides this, a very terrible kind of peritonitis is the frequent result of the extravasation of the contents of the alimentary canal, or of urine, or of bile, into the cavity of the membrane; through apertures that are sometimes made by external violence, but more often are the consequences of the progress of previously existing disease.

I shall make a few observations in respect to one or two of these points, and but a few.

That awful disorder, *puerperal fever*, is more frequently accompanied with *inflammation of the peritoneum*, than with any other inflammation. This variety of peritonitis necessarily engages the attention of the accoucheur; and it doubtless is more fully considered in the lectures of the Professor of Midwifery than I propose to consider it. Indeed, if you would understand puerperal fever as a whole; its shifting aspects, its single source, and its appropriate management; you must study Dr. Ferguson's masterly and conclusive essay on that subject.

Of 44 fatal cases of well-marked puerperal fever which fell under the observation of Dr. Robert Lee, and in which the bodies were carefully examined, the *peritoneum and uterine appendages* were found inflamed in 32: that is, in 8 cases out of every 11. The inflammation commences, no doubt, in the uterine portion of the membrane, and spreads thence over the larger part of its surface. Now this peritoneal inflammation, occurring to women in childbed, may be accidental and sporadic: or it may prevail in a district epidemically. And a most dreadful and deadly affection it may then become. In either case, the peritonitis may commence a few days, or even a few hours, after parturition. The pain generally begins low in the abdomen, in the situation of the uterus; which may be felt through the abdominal parietes, and is tender on pressure: but soon a universal swelling takes place, and the womb can no longer be distinguished. Cases of this kind arise sometimes, apparently, from cold; and exhibit no peculiar feature. It is just what we might expect when a female, in a state of weakness and irritability, happens to be exposed to the exciting causes of inflammation. In such a state, a less degree of the exciting cause would be sufficient to produce the inflammation: and probably a less degree of inflammation may prove fatal.

But when peritonitis is frequent among women after child-birth in a particular neighborhood, or in a Lying-in Hospital, it is marked by greater depression of the vital powers, and runs a mere irregular course. The nervous system suffers, the sensorium is apt to become affected, and the complaint assumes rather the character of continued fever than of simple inflammation of the peritoneum. And no wonder; since this variety of peritonitis forms part of a disease which, like continued fever, is a *general* disease, and results from contamination of the blood. This Dr. Ferguson has clearly established. The contamination may originate in the body of the patient herself: the noxious material being supplied by putrid coagula, or portions of placenta, remaining in the uterus; or some of the products of inflammation may enter the blood-vessels, and constitute the poison. And this it may be difficult, or impossible, to prevent. But on the other hand, the contamination may arise in the way of *contagion:* this horrible malady may be communicated from one lying-in woman to another by the intervention of *a third person:* and doubtless it is so carried and propagated, in many instances, by midwives and accoucheurs. Now this source of the disorder may be obviated; and therefore it is of the utmost importance that it should be clearly recognized, in order that it may be carefully provided against.

You must know, however, that great differences of opinion have existed, and, I believe, still exist, in respect to the contagious quality of certain forms of puerperal peritonitis; just as great differences exist as to the contagiousness of continued fever, of cholera, of the plague. There are parties who regard the whole notion of contagion as a mere bugbear; and there are others who embrace in their allegations of contagion many more diseases than can be *proved* to be so caused. The same strong assertions are made, the same kind of eagerness is displayed (the same *party-spirit*, I had almost said) as mark the strife of ordinary politics. It is our serious duty, however, to inquire what is the truth in this matter: for the safety of individuals, and the happiness of whole families, we may often hang upon our opinions. I must trouble you, therefore, with a few facts that bear closely upon the subject.

We possess some valuable and highly instructive accounts of epidemics of the kind I am alluding to. One by Dr. Gordon, on the epidemic peritonitis after child-birth, which took place at Aberdeen in the years 1789, 1790. Another by Mr. Hey, on that which happened at Leeds from 1809 to 1812. And a third by the late Dr. Armstrong, on that which was observed in Sunderland and its neighborhood in 1813. Dr. Robert Lee has also collected some very interesting facts in reference to the spreading of the peritonitis by contagion. Dr. Gordon affirms that he had unquestionable proof that the cause of the disease was a specific contagion, and that it did not arise from any noxious constitution of the atmosphere. The disease seized such women only as were visited or delivered by a practitioner, or taken care of by a nurse, who had previously attended patients affected with the same disorder. And Dr. Armstrong observed that 40 out of the 43 cases that happened in Sunderland, occurred in the practice of one surgeon and his assistant.

From among other histories—all tending to the same conclusion—brought together by Dr. Lee, I take the following:—

'On the 16th of March, 1831, a medical practitioner, who resides in a populous parish on the outskirts of London, examined the body of a woman who had died a few days after delivery, from inflammation of the peritoneal coat of the uterus. On the morning of the 17th of March, (i. e., the *next* morning,) he was called to attend a private patient in labor, who was safely delivered on the same day. On the 19th, she was attacked with severe rigors, great disturbance of the cerebral functions, rapid feeble pulse, with acute pain of the hypogastrium, and a peculiar sallow color of the whole surface of the body. She died on the fourth day after the attack, on the 22d March; and between that period and the 6th of April, the same practitioner attended two other patients, both of whom were attacked by the same disease in a malignant form, and fell victims to it. On the 30th of March he bled a young woman who had pleurisy: the wound became inflamed after a few days; erysipelas, redness, and swelling, extended from it up the arm; and in four or five days that patient died of phlebitis.'

Mr. Roberton, of Manchester, states the following facts, in a paper in the *Medical Gazette*:—From the third of December, 1830, to the 4th of January, 1831, a midwife attended thirty patients for a public charity. Sixteen of these were attacked with puerperal fever, and they all ultimately died. In the same month, 380 women were delivered by other midwives for that institution; but none of the 380 suffered in the smallest degree. All the sixteen had inflammation of the peritoneal surface of the uterus. So, also, Dr. Robert Lee tells us that, in the last two weeks of September, 1827, five fatal cases came under his observation. All the patients had been attended in labor by the same midwife: and no example of a febrile or inflammatory disease of a serious nature occurred during that period among the other patients of the same dispensary, who had been attended by the other midwives belonging to the institution.

Statements of this kind—and they could be largely multiplied—furnish irresistible evidence, that the peritonitis, which prevails epidemically among lying-in women, is of a specific nature, and communicable from one person to another. It is observed, also, to reign as an epidemic especially in Lying-in Hospitals, and that it recurs at irregular intervals, sometimes leaving them quite exempt from its ravages for years together.

Indeed, I believe that these cases of puerperal fever occurring in succession to the same practitioner, are examples of something more than ordinary contagion, operating through the medium of a tainted atmosphere. I believe them to be instances of direct inoculation. Recollect, that the hand of the accoucheur is brought, almost of necessity, into frequent contact with the uterine fluids of the newly-made mother. Recollect,—those among you who have examined the interior of the dead body with your own hands,—recollect, with what tenacity the smell, which is thus contracted, clings to the fingers in spite even of repeated washings; and, whilst this odor remains, there must remain also the matter that produces it. Recollect how minute a quantity of an animal poison may be sufficient to corrupt the whole mass of blood, and fill the body with loathsome and fatal disease. Illustrations will occur to you in the inoculated small-pox, in hydrophobia, in the viper-bite, in the scratches and punctures of the dissecting-room. Recollect the raw and abraded state of the parts concerned in parturition; the interior of the uterus forming a large wound, and presenting, as Dr. Ferguson observes, an exact analogy to the surface of a stump after amputation; the more external soft parts bruised and sore. Bear in mind the remarkable fact, that this contagion does not affect other persons, but only lying-in women. Recollecting these facts, you will see too much likelihood in the dreadful suspicion, that the hand which is relied upon for succor in the painful and perilous hour of child-birth, and which is intended to secure the safety of both mother and child, but especially of the mother, may literally become the innocent cause of her destruction: innocent no longer, however, if, after warning and knowledge of the risk, suitable means are not used to avert a catastrophe so shocking.

I need scarcely point to the practical lesson which these facts inculcate. Whenever puerperal fever is rife, or when a practitioner has attended any one example of it, he should use most diligent ablution; he should even wash his hands with some disinfecting fluid, a weak solution of chlorine for instance: he should avoid going in the same dress to any other of his midwifery patients: in short, he should take all those precautions which, when the danger is understood, common sense will suggest, against his clothes or his body becoming a vehicle of contagion and death between one patient and another. And this is a duty so solemn and binding, that I have thought it right to bring it distinctly before you.

In these days of ready invention, a glove, I think, might be devised, which should be impervious to fluids, and yet so thin and pliant as not to interfere materially with the delicate sense of touch required in these manipulations. One such glove, if such shall ever be fabricated and adopted, might well be sacrificed to the safety of the mother in every labor. Should these precautions all prove insufficient, the practitioner is bound, in honor and conscience, to abandon, for a season, his vocation.

That variety of peritonitis which results from perforation of the stomach or intestines, and the effusion of their contents into the cavity of the belly, is full of interest. The inflammation is violent in degree; universal (generally) in extent; and almost always fatal. The attack is characterized by its suddenness. All at once intense pain arises in some region of the abdomen, which soon becomes tender in every part. The pain is incapable of removal, and generally even of mitigation, by medicine, and death takes place in a short time. These are the general features of such cases. Occasionally, the symptoms follow some different order. Thus, I have seen a case in which no pain was complained of, and the source of the inflammation was not suspected until the dead body was examined. This was a case of *fever;* and it had been attended with much stupor, which was probably the reason that no indication of suffering was made by the patient. Occasionally, but that is uncommon, the pain intermits. For the most part, however, it resists all treatment, and ceases only with life, or a short time before life is terminated.

Most of the instances of this kind of peritonitis that I have witnessed have resulted from perforation of the ileum, in the progress of continued fever. You are already aware, that the glandulæ agminatæ, which are found only in that bowel, and the glandulæ solitariæ, which are scattered over nearly the whole inner surface of the alimentary tube, are very liable, in continued fever, to inflammation, sloughing, and ulceration: and sometimes the ulcers go through: the contents of the gut are poured into the cavity of the serous membrane, and intense inflammation is lighted up. I purposely abstain from going into any particulars respecting these ulcers. We are no further concerned with them at present than as they furnish the channel by which the cause of the peritoneal disease is introduced. Once, and once only, as I stated before, have I known perforation occur from the extension of scrofulous ulceration of the same glands in phthisis. In general, in that disease, the ulcer runs a much slower course. As it approaches the peritoneum, circumscribed chronic inflammation is set up in that membrane; lymph is thrown out; and the bowel becomes adherent to some other portion of the canal, or to some of the other viscera of the abdomen. In this way the perforation is prevented; or, should it take place, the escape of the contents of the bowel into the peritoneal sac is prevented. Occasionally, when two portions of the tube thus adhere together, a communication is formed between them, and the contents of the intestine either reach an advanced point of their stated journey by a short cut; or are carried back again perhaps to a spot which they had already passed.

A very curious instance of this latter event has been described by Dr. Abercromby. A man, fifty-six years old, who had shown no signs of serious illness, but had labored under impaired appetite, languor, and occasional pain in the abdomen, for two or three weeks, was suddenly seized, while out walking, with vomiting; and he observed that what he brought up was stercoraceous: and this occurred again and again, at variable intervals; the matter vomited being distinctly fæcal, and sometimes so solid that he was obliged to swallow warm water to soften it, that it might be expelled from the stomach more easily. He never vomited his food; and no tumor, or other sign of organic disease. could be detected by external examination. He lived about three months, and died at last of exhaustion: and then it was discovered that the stomach and transverse arch of the colon were adherent to each other, and that a ragged aperture of communication between them existed at the place of adhesion.

It is a curious fact, that the vermiform appendage of the cæcum is not unfrequently the seat of a penetrating ulcer. I have traced little groups of glands in that slender tube: and I have known perforation to happen from the specific ulceration of continued fever; and from the accidental ulceration caused by a cherry-stone lodged there.

Sometimes it is the stomach that is perforated, either by a common or by a specific ulcer; and the symptoms are exactly the same as when the bowel gives way. Sudden, unremitting pain; tenderness, and tympanitic distension of the abdomen; and early death.

Perforating ulcers of the stomach are of various kinds. It is not uncommon to find one small roundish hole, with edges as smooth and clean as if a piece of the stomach had been cut out by a punch, and without any surrounding hardness, or other mark of disease. Occasionally the orifice is more irregular, and occupies the centre of a thickened indurated patch of the mucous membrane. Several instances of this sort of perforation have occurred under my own eye; two within the last fourteen months, (1839.) Almost all the patients have been young women, plump, and in good condition; who, up to the moment of the fatal seizure, either seemed to enjoy perfect health, or, at most, had complained of slight and vague feelings of dyspepsia. Ulcers of the stomach are, however, mostly chronic; and the diseased viscus is commonly fenced about and protected by adhesion to the neighboring parts, before its coats are completely penetrated by the ulcer. You are probably aware that this happened in the body of Napoleon Bonaparte. He died of cancer of the stomach. That organ was strongly adherent to the concave surface of the left lobe of the liver, which formed a part of the wall of the stomach; and this adhesion, no doubt, prolonged his life.

Usually the actual perforation, in cases such as we are now considering, takes place merely from the natural progress of the ulcer; but sometimes it would appear that the thin membrane which remains is broken by some accidental force applied to it. Thus the symptoms have immediately followed the act of vomiting, brought on by an emetic. Bouillaud relates an instance in which the perforation happened while the patient was straining at stool; and it is conceivable enough, that rough pressure of the abdomen might complete the rupture, when the ulcer had already eaten through all the coats of the bowel except its peritoneal coat.

Less commonly than this, in my experience at least, the peritonitis is set up by the escape of urine from the urinary bladder, through the extension of an ulcer, or from a forcible rupture of that bag by a blow or a fall, when it was distended with urine. Rupture of the gall-bladder, whether by violence or from ulceration, has the same results; so also has, in general, the rupture of the uterus, which sometimes takes place during the efforts of parturition. Abscess of the liver, bursting into the peritoneum, is another occasional source of severe and fatal inflammation of that membrane. Acute and general peritonitis sometimes arises, also, in consequence of penetration from without; i. e. it succeeds the puncture made by the trocar in the operation of tapping the belly: and these cases, too, are almost all of them mortal; chiefly, I presume, because, in nine instances out of ten, they occur in an unhealthy and debilitated subject.

I formerly offered you some observations respecting a form of hysteria which very closely mimics peritonitis, and would most certainly deceive a medical man who was not on his guard against it. We judge by the age and sex of the patient somewhat; by the presence of hysteria in other forms, or of the hysteric diathesis; by the excessive tenderness of the abdomen, or rather of its surface; by the coexistence of the same exquisite sensibility in other parts; and by the incongruity and shifting character of the symptoms. The pulse and the tongue will perhaps be natural, while the abdominal irritation is at its height. Forewarned, you will seldom find much difficulty in establishing the diagnosis. Of the signs by which peritonitis may be distinguished from enteritis, I shall speak when I come to the latter disease.

Acute peritonitis, in its simple form, is always a dangerous, yet frequently a manageable disease. When it is complicated with other and earlier organic mischief, and especially when it has been excited by the entrance of foreign matters into the cavity of the belly, it is all but hopeless under any treatment.

In speaking of the mode of cure, I have again to repeat, *mutatis mutandis*, the grand remedies for inflammation, and particularly for the adhesive inflammation proper to serous membranes: *blood-letting: mercury.*

It is of the greatest importance in this, as in many other cases of inflammation, that the blood-letting should be performed *early.* You must not be deterred from bleeding by the mere smallness of the pulse: a quality which I have frequently shown you to be characteristic of acute inflammation within the abdomen; and which, in the disease now in question, is often present from the very beginning. If the pulse be wiry and hard, we disregard, in these cases, its smallness. Not uncommonly it is rendered more full, as well as softer, by venesection; and this, when it happens, gives assurance of the propriety of that measure.

Topical blood-letting is of much efficacy—of greater efficacy perhaps than in most other forms of abdominal inflammation Cupping is out of the question, from the tender state of the abdomen. But in adults, after a full bleeding from the arm, such as has produced some sensible impression upon the circulation, or brought the patient to the verge of syncope, the surface of the belly should be *covered* with leeches. From twenty to forty may be applied at once: and sometimes this will make any further loss of blood unnecessary. But in severe cases, you may expect to find that repetitions of at least the local bleeding will be requisite.

After the leeches have fallen off, a light poultice may be laid over the abdomen; or it may be assiduously fomented with flannels wrung out of hot water. These means will encourage the bleeding from the leech-bites; and are generally found to afford great comfort to the feelings of the patient. *Cold* applications have been recommended by some practitioners of high authority. Dr. Sutton injected cold enemata, and applied cloths, made wet with cold evaporating lotions, to the abdomen with good effect: and Dr. Abercromby has since reported favorably of the same kind of treatment. However, I should think this a more precarious plan than the opposite: and I have always observed so much relief to be given by warm fomentations that I have never had the inclination, or the courage, to employ cold.

It is extremely desirable, in these cases, to obtain as speedily as possible the specific operation of mercury upon the system; by calomel and opium, or by inunction. It cannot be necessary that I should again go over in detail the means of following out this indication; but it is an indication which we must diligently pursue.

Most writers whose works I am acquainted with, recommend *purgatives* as highly serviceable in peritonitis. I do not think the good which they are calculated to do as antiphlogistic remedies can at all be put in competition with the harm that I am persuaded they may produce, by increasing the peristaltic action of the intestines, and so causing additional friction and tension of the inflamed membrane. I believe that in all cases of well marked and pure peritonitis, when the inflammation is limited to the serous membrane, it is far better and safer to restrain than to solicit the internal movements of the alimentary tube. In a pamphlet published several years ago by Mr. Bates, of Sudbury, some striking instances are recorded of recovery from severe peritonitis, under large and frequent doses of opium, and a rigid adherence to the horizontal posture, until all pain had subsided. The patients were not allowed to raise themselves, on any account, into a sitting position: and the opium was administered sometimes by the mouth, sometimes by the rectum. These cases, related in an unpretending manner by a practical observer, made a strong impression on my mind when I read them. To simple inflammation of the peritoneum, to those perilous forms of peritonitis which occur in women after delivery, and to those still more terrible cases that follow perforation of the serous membrane, this principle of keeping the intestines at rest is alike applicable. I stated a little while ago, that the last-mentioned cases are all but hopeless. The *all but* I inserted on the strength of some most interesting facts published by Dr. W. Stokes, in the second number of the *Dublin Journal of Medical and Chemical Science*. He truly remarks, that in most of these accidents, the powers of life sink so rapidly that bleeding, either local or general, cannot be attempted. Neither can we employ mercury internally, for fear of exciting the peristaltic action of the bowels, which of course would tend to tear asunder recent adhesions, to keep the communication between the mucous and serous surfaces open, and to cause a fresh ingress of fæcal or other extraneous matter in the sac. Yet in a few instances we find that the patients live for several days, and that a process of organization commences in the effused lymph. It seems that some years before Dr. Stokes wrote this paper, he had witnessed the admirable effects of opium in low forms of peritonitis, as administered by Dr. Graves; who thus saved two individuals in whom that disease followed paracentesis, without abstracting a drop of blood. I cannot refrain from quoting to you the particulars of one instance, in which the efficacy of the opiate treatment was conspicuous. 'The well known symptoms of perforation of the intestines had existed for two days; the patient was apparently sinking, 'his countenance was collapsed, anxious, and expressive of dreadful suffering; the extremities were cold, and the pulse hardly perceptible.' The exhibition of sixty drops, in the twenty-four hours, of the preparation called the *black drop* was followed by the most signal improvement. The pulse regained fulness and softness, the extremities became warm, and the countenance had lost the Hippocratic expression. The patient could bear pressure on the abdomen, which the day before was exquisitely painful. The same treatment was continued for twenty-four hours longer; and by the end of that time every symptom of abdominal inflammation had completely subsided. The belly felt natural, there was no tenderness, the pulse was good, and the patient declared himself well.' At this period of the case, Dr. Stokes omitted the opium, and gave the mildest possible saline laxative, as there had been no stool for forty-eight hours. Four evacuations took place, followed by the immediate return of the symptoms of peritonitis, under which the patient rapidly sunk.

'The intestines were every where agglutinated together, and adherent to the parietal peritoneum, except in the left iliac fossa, where a quantity of yellow puriform matter was collected. On detaching the caput coli from the peritoneum lining the right iliac fossa, a small perforation of the gut was discovered, by the escape of the contents of the intestines in a jet,' &c. &c.

This example puts in a very strong light the *good* effects of *opium*: the *dangerous* effects of *purgatives*; and the *mode* in which recovery from these frightful accidents *may* sometimes be brought about.

Dr. Stokes gives another instance in which the patient *did* recover; after taking 105 grains of opium, besides what was administered in injections: and he alludes to a third case, in which the employment of opium was successful, when peritonitis had supervened upon the bursting of an hepatic abscess into the cavity of the abdomen.

Now I would earnestly recommend you to consider the expediency of applying the same principle of treatment, as an auxiliary, when the peritonitis does *not* grow out of previous organic disease: in all cases, in short, of *mere peritonitis*. The opium is not to supersede the bleeding, nor the mercury; it is not incompatible with either of those remedies; and it may, I believe, be most advantageously adopted in conjunction with them both.

GLEANINGS FROM THE FOREIGN JOURNALS.

Disease of Sappers and Miners.

BY DR. KANZLER.

[Dr. Kanzler describes a peculiar, and, as far as he knows, hitherto undescribed disease, which affects miners. It was produced by exposure to impure air in the long 'galleries,' or subterranean passages. Dr. K. saw upwards of two hundred patients affected by this 'mine disease.']

The disease presented itself in different degrees. In the slightest degree there was only a heavy pain in the head, situated especially at the forehead and temples, and giving notice to those who were affected with it, that they should leave the galleries and go into the open air; which if they did not do, a higher degree of the affection soon came on. In the fresh air the headache commonly soon ceased; but it usually came on again as soon as the patient went back into the galleries, and it thus rendered then unfit for work for the whole day.

In a severer form of the disease the patients were seized with an excessive oppression at the chest, as if it were tied round with a cord; an instant after they lost their consciousness, fell to the ground, and had to be carried out of the gallery. Sometimes a third and higher form occurred, in which to the symptoms just described there were added clonic spasms, the patient's face becoming pale or livid, foam appearing at the mouth, and the thumbs being firmly bent in upon the palms. There was also a peculiar form of the disease in which the patients fell into a kind of drunkenness; they grew very talkative at their work, laughed incessantly and without cause, and jumped and danced about just like tipsy men. This state in some cases ceased on exposure to the fresh air; but in others it suddenly gave place to the severest headache, and before they were seen the patients fell down unconscious and convulsed. The unconsciousness and convulsions sometimes lasted for but a few minutes, sometimes for half an hour; and they were almost always followed by the condition which the patients described as the most painful of all, namely, a constant retching and a most terrible nausea, which only rarely ended in actual vomiting. At the end of all the disease a distressing heavy headache came on, and in some cases lasted three days.

The cause of this affection was of course the inhaling of gases which were formed in the galleries by the explosion of the powder. The form which presented symptoms like those of drunkenness was probably due to the production of nitrous oxyde, which, it is well known, when inspired in sufficient quantity has intoxicating properties.

The treatment was very simple. If there were nothing but headache, the greatest relief was afforded by pouring some vinegar on a handkerchief and making the patient inhale its vapor; and with this fastened under his nose he might even go back into the first part of the gallery and continue his work. When men were brought out unconscious, dashing them with cold water, and the snuffing of strong odors were employed; and when the nausea and retching came on, nothing acted more quickly or certainly than a spoonful of wine with 20 or 30 drops of spts. æther. sulph. In some cases of severe convulsions, when the face was dark, livid, and the pulse full and large, bleeding was beneficial. In those who had the drunken form of the disease, it answered best to let them recover slowly in the fresh air, and then to make them keep quiet. —*Casper's Wochenschrift.*

Researches on Saccharine Diabetes.

BY DR. BOUCHARDAT.

[This is the second of two papers on the subject, read by M. Bouchardat at the Academy of Sciences. In his former essay he showed that the quantity of sugar in diabetic urine is in direct proportion to the bread or feculent substances which the patient takes for food. He further ascertained that the water which persons suffering under diabetes take in such abundance is not usually more than is necessary to effect completely, by means of the diastase, the transformation of the fecula into sugar.

From these observations he had deduced the conclusion that, for the cure of diabetes nothing more is requisite than to withhold as far as possible all fluids, or articles of diet containing sugar or fecula; and the present paper contains the results of some cases in which this plan was adopted.]

M. Bouchardat found it impossible to withhold farinaceous food and fluids as completely as be wished, and consequently his success was but temporary. The nutritive properties of gluten having recently become more known by the researches of the *commission de la gelatine*, he next endeavored to form from it an aliment which might supply the place of bread. In this he so far succeeded as to have formed an exceedingly palatable substitute for bread, with the addition of only a fifth of farina. The beneficial effects of this substitute for bread are shown in two tables; from which it appears, that when common bread and that made from gluten were given on alternate days, the employment of the latter was always accompanied with an extremely marked diminution both in the quantity of urine and in the amount of sugar it contained. The next indication would be to promote the perspiration, and to restore to a healthy character the secretion of the diseased mucous membrane of the stomach. M. Bouchardat insists on flannel being worn next the skin, and regards it, with the employment of opiates and preparations of ammonia, as the means best calculated to promote diaphoresis.

The histories of four patients who were submitted to this treatment are detailed. Two received but slight benefit; a third was cured so completely that all traces of sugar disappeared from his urine, which presented in all respects the characters of the healthy secretion; and so small a proportion of sugar is contained in the urine of the fourth patient, that M. Bouchardat confidently anticipates his perfect recovery. It is worthy of observation that the treatment was not altogether identical in the four cases; for the first two did not wear flannel garments next their skin, and the employment of carbonate of ammonia in those instances was followed after two days by a change in the urine from acid to alkaline, together with a slight increase in the quantity of sugar. In the other two cases, the thickness of the flannel garment was always increased whenever the sugar in the urine became more abundant; and, notwithstanding the administration of the carbonate of ammonia, the urine of these two patients continued acid throughout.—*Comptes Rendus de l'Académie.*

Researches into the real Nature of Œdema of the Glottis.

BY M. BRICHETEAU.

[The object of this paper is to disprove the existence of œdema of the glottis as a distinct disease, unconnected with other affections of the larynx. M. Bricheteau criticises the facts adduced in Bayle's paper on the subject, and laments their incompleteness, as well as that of the cases which are found in the thesis of M. Thuillier. M. Bouillaud published three observations in the year 1825, tending to prove that this disease is in reality an inflammation of the larynx, pharynx, and surrounding parts. The remarks contained in the prize essay of MM. Trousseau and Belloc favors the same conclusion, which is further strengthened by the three cases detailed by the present author. Two of these cases terminated in recovery, but in the third the patient sank after the performance of tracheotomy. Some disease of the larynx existed in all three instances, to which œdema of the glottis succeeded.]

This œdema, which, strictly speaking, affects the lips of the glottis not the glottis itself, is always a very serious affection, on account of the seat which it occupies. It cannot, however, be regarded as an idiopathic disease, and is itself more frequently an inflammatory affection or a purulent infiltration into the part than a serous effusion. It supervenes in the course of various diseases of the larynx, and should not occupy a different place in works on pathology from œdema or tumefaction of a part produced by any morbid poison, or from the various symptoms which attend syphilis, or from ulceration of the intestines in fever.—*Archives Générales de Médecines.*

Blood-letting in Mania.

[The object of this paper, by Dr. Crawford, in the *London Medical Gazette*, is to prove the extreme rarity of the cases in which sanguineous depletion is justifiable in mania. The author observes:—]

It may be asked, in what case is the abstraction of blood admissible? With regard to general blood-letting, I repeat that it is very rarely indeed that it can be either indicated or justified. Most of the cases, I believe, in which it has been tried with beneficial results, would, were we in possession of sufficient details, turn out to be cases in which there was inflammation of the brain or its membranes, of a more or less acute character; cases, in short, of encephalitis, in which some of the symptoms were perhaps slightly modified by accidental circumstances or individual peculiarities. Such cases occasionally find their way within the walls of institutions devoted to the treatment of the insane, and by the hasty or inexperienced observer may readily be mistaken for acute mania. There are, however, certain cases, both of mania and other forms of insanity, in which there is an evident congestion of the vessels of the head; where the pulse is firm; the pupil contracted; where every thing leads us to believe that the congestion is of an active not a passive character; where there is no reason to fear a want of vascular tone or apprehend effusion; and in such cases the judicious application of leeches or the cupping-glasses is calculated to be highly beneficial. Even when the congestion is of a more passive character, and where the veins of the scalp are full, tumid, and tortuous, a very moderate and cautious employment of local blood-letting may be serviceable; although in this last case the safer expedient of dry cupping on the nape of the neck, and along the course of the spine, will be frequently found to answer the end as well.

Gallstones.

[Mr. Crisp has an article on this subject in the *London Lancet*. The following are the general conclusions to which the author's researches have led him.]

1st. That females are more liable to these affections than males: the proportion as three to one, exclusive of Dr. Heyfelder's cases, 2 to 1.

2d. That the greater number are persons of melancholic and bilious temperaments, and are in the middle and upper ranks of life.

3d. That mental disquietude is a very frequent cause.

4th. That sedentary habits and good living, especially eating, also excite these maladies, and that they are most frequent between the ages of thirty and sixty.

5th. That fat people are not, as most authors assert, more subject to the disease than those of spare habit.

6th. That the use of fermented drinks operates but little in the production of the complaint. This opinion is strengthened by the circumstance of gin-drinkers being, I believe, less liable to these affections; as well as their greater prevalence amongst females. In many of the cases the habits of the patients are not mentioned; but only two are described as intemperate.

7th. That these calculi may exist without producing but little, if any, inconvenience; and in the majority of cases there is no apparent structural change in the liver or gall-bladder.

[In regard to treatment, the author, after noticing several methods in use, of the efficacy of which he appears to be sceptical, seems to confide principally in the salutary effects to be derived from air, exercise, and regulation of diet, mental quiet, 'stomachic,' and alterative medicines, cold and tepid sponging, with frictions. He refers to Durande's celebrated remedy of which Dr. Copland speaks favorably, although the author distrusts Durande's own account of its success. The remedy consists of two parts of spirits of turpentine, and three of sulphuric ether, of which forty drops are to be taken every morning and during the passage of stones.]

On Abscess in the Substance of the Walls of the Bladder.

BY M. CIVIALE.

[In the *Bulletin General de Therapeutique* M. Civiale publishes an able article on this subject. The following are the results of his experience derived from several cases:—]

In these cases the pus may either be infiltrated in the cellular tissue, giving an increase of thickness to the bladder, or it may collect in layers between its membranes, or may be arranged in distinct abscesses varying in size and number. In most instances the abscesses form near the summit and the fore part of the bladder; not, as Chopart says, near the perineal portion. Their diagnosis is very difficult: there is seldom any external tumor, and when there is, its characters are too variable to decide whether there be matter, and whether it be without or in the walls of the bladder. Neither can the existence of an abscess be determined by the occasional discharge of pus; for that may happen when the bladder is sacculated. According to the surface of the bladder nearest which they collect, these abscesses discharge themselves either into the surrounding cellular tissue, or into the cavity. Their formation generally depends on the irritation of calculi, or on blows or wounds, but sometimes occurs without any appreciable cause. They are not always attended by pain, or by any peculiar disturbance of the functions of the bladder; nor is there any method of examination by which their existence can clearly be discerned. In numerous instances they have been either overlooked, or treated as cases of retention of urine, or imagined to exist when the bladder was only sacculated, or when the pus had collected in the tissue around it, as it does more commonly than in its walls.

On the Application of the Subcutaneous Method to the opening of Chronic Abscesses.

BY M. JULES GUERIN.

[The following is an outline of Guerin's plan. He states that in no case—and he performed the operation twenty-two times—has he observed any bad effect traceable to the operation:—]

M. Guerin uses a flat trocar, long, but of small diameter, and enclosed tightly in a canula. The canula is furnished with a cock near its larger end, which, when open, permits the trocar to pass, but, when shut, exactly closes the canula. The outer end of the canular fits on the nozzle of an ordinary syringe, and all those parts are so adapted that no air may pass where they fit one to the other. A fold of skin being made at some little distance from the abscess, the trocar and canula are introduced at its base, and carried under the integuments till the point of the former has entered the sac; then the trocar is slowly withdrawn, (an assistant gently pressing the walls of the abscess,) and at the instant that its point passes the cock, *that* is turned and the pus prevented from flowing out. The syringe is now adapted, the cock turned back, and the pus sucked out of the sac at once, or with one or more emptyings and refillings of the syringe, if the quantity be very large. When this is finished the canula is slowly withdrawn, care being taken to keep the walls of the track through which it passes close together. A pad and bandage are then put on the sac, and the track leading to it, and the orifice of the latter is closed with sticking plaster.—*L'Examinateur Médical.*

On Myelitis Infantum.

BY DR. SCHLESIER.

[Dr. Schlesier has had two opportunities of observing this disease, both times in female children between three and four months old.]

After some days of general indisposition, the children became extremely feverish, and this fever presented frequent though irregular remissions and exacerbations. Children thus affected lie on the back, and cry if any one moves them from that position. Their dread of quitting it indeed is so great, that if taken in their mother's arms they refuse the breast, though they suck with avidity if the mother stoops over them so as to give them the breast while in the recumbent posture. The muscles of the neck and back now become stiff, the child anxiously avoids every movement. Muscular tremors come on, especially affecting the upper extremities, and the flexors more than the extensors. These convulsive movements gradually involve the whole body, twitchings of the face and of the upper extremities are constant, and the head is fixed perfectly stiff. An attack of convulsions with episthotonos comes on, lasting five or six minutes, and returns after the lapse of six or eight hours. By degrees these attacks increase in severity and frequency; in the intervals the children lie in an apathetic state, whimpering rather than crying, but never obtaining any sleep. During the continuance of the disease, which lasts for some days, the bowels are costive, the urine scanty, and the fever considerable. At length copious sweats break out on the head, and during some fit more severe than the others the child dies.

Dr. Schlesier examined the cervical portion of the spinal cord of one child, the parents not allowing him to make a complete post-mortem inspection. He found considerable redness of the arachnoid and pia mater, and a copious exudation of lymph between the two membranes. The venous plexuses were loaded with blood, and the substance of the cord was softened and presented a dirty yellow color.—*Medicinische Zeitung.*

Entropion.

Dr. Jacob, of Dublin, has in two cases successfully treated entropion by the following operation, which is a modification of that of Sir P. Crampton.

'The patient being placed in a sitting posture, and the head supported by an assistant, the inverted upper lid was separated from the globe of the eye by means of the finger or a sharp hook, and then with a pair of strong scissors two perpendicular incisions were made through the tarsal cartilage, each about a quarter of an inch in length, one upon the temporal, the other upon the nasal side, avoiding the punctum, and including the whole inverted portion of the lid; this part being now everted and held in that position, the two perpendicular incisions were connected by a horizontal incision upon the conjunctival surface close to the ciliary margin by means of a scalpel, cutting through the conjunctiva and tarsal cartilage, and leaving the inverted portion of the margin united to the rest of the lid, merely by the integuments; taking care that the knife did not penetrate through the skin. The inverted portion of the lid now no longer turned against the ball of the eye, and as soon as the smarting from the operation subsided, the patient felt relief—a light pledget of lint wet with cold water, or a dilute solution of sulphate of zinc was then laid upon the eye, and moistened occasionally.

'The success of this operation depends in a great measure upon the edges of the incision being prevented from uniting by the first intention, particularly the horizontal incision upon the conjunctival surface; this is effected by everting the lid occasionally during the first few days, and by touching the edges immediately after the operation with the sulphate of copper, so as to cause it to suppurate and fill up by granulation.'—*Dub. Med. Press.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, November 19, 1842.

We have just received a copy of a very important document, published by the city authorities, and containing the report of the distinguished medical gentlemen appointed to conduct a series of investigations and experiments, in relation to the effects produced by the use of poisonous smoked beef.* As the Committee, to whom this business was entrusted, have discharged their duty with much industry and fidelity, and as the results of their inquiries are of evident importance and general interest, we deem it proper to put our readers in possession of them, and so give them permanent record.

The attention of the civic authorities was first directed to this subject by the sudden occurrence of alarming illness in several families, after their having partaken of an ordinary quantity of smoked beef, obtained from a grocer in their neighborhood.

The symptoms are thus described in the Report:

Pain and uneasiness were experienced at the præ-cordial region, which, extending to the back and loins, were only temporarily relieved by the dejections which followed: vomiting soon supervened, attended with great thirst and a burning sensation at the pit of the stomach; indeed, the irritability of this organ soon became so great, that no substance, either as food or medicine, could be retained by it for an instant. These symptoms soon assumed the most aggravated form, Nature being taxed to the utmost to eliminate from the system the noxious matter with which it was infected. As a consequence of this excessive action, the greatest prostration followed,—the functions of the nervous, the muscular, and the digestive systems were much impaired,—and so protracted has been the period of convalescence, that some of the patients who were more severely attacked, still suffer from the effects of this indisposition. The primary symptoms being those of ordinary cholera, did not excite in the minds of the persons affected, any suspicion as to the cause of the illness until being closely interrogated by the attending physician, Dr. Fayette Cooper, the fact was elicited that they had each partaken of a quantity of smoked beef on the evening preceding the morning on which they were attacked. Similar instances soon multiplying in other families, amounting in all to forty-three, an interchange of visits took place among the attending physicians; and the fact being ascertained that each patient affected had used the same article, it was not doubted that the beef in question was impure, unhealthy, or contained some poisonous principle.

---

* *Report on the Effects Produced by Poisonous Smoked Beef.* By M. Post, M.D., Alex. E. Hosack, M.D., and James R. Chilton, M.D. Document No. 34. Board of Aldermen. October 24, 1842

Only one case proved fatal—that of a girl aged six years, who had previously been subject to attacks of viscual inflammation.

In her case there was no remission of the symptoms, and she died on the fifteenth day from the commencement of the attack. A post-mortem examination being made, the blood was found not coagulated,—it followed the knife freely, as in instances of death from drowning, lightning, &c.; the mesentery was enlarged; the mucous coat of the ileum exhibited a highly inflamed appearance, which was confined to a space of about six inches in length, and embraced the entire calibre of the intestine. The stomach, brain, and other organs, appeared not to have suffered any lesion.

After a series of experiments, carefully conducted, the Committee arrived at the following conclusions:—

1st. That the beef contained no mineral or vegetable poison. 2d. That when eaten it produced aggravated symptoms of disease in the animals. 3d. That a decoction made from the infected beef, when thrown into the circulation, produced death in about three hours and a half. 4th. That a similar preparation, made from sound beef, produced no marked signs in the animal experimented on. 5th. That the poisonous principle was not resident in the fat of the beef, which was found to be the case when this principle is developed by putrefaction. 6th. That putrefaction in different stages produced no effect upon the animals.

After an interesting account of several epizootic maladies which have at various periods prevailed in Europe, the Report goes on to speak of the peculiar affection which extensively prevails in the northern section of this country, being met with in all the Western States as far south as Mississippi, and as far north as the boundary. It is, however, most frequent in parts of Indiana and Illinois.

It appears from the account given of the disease by Dr. Graff, that, from ignorance of its precise nature, it has there received the name of milk sickness, and that its localities are frequently circumscribed. In one instance it can be traced for nearly one hundred miles, running parallel to the Wabash river; again it may be found to occupy an isolated spot, comprised in an area of a hundred acres. This disease attracted the attention of Hennipin, who ascended the western rivers early in the last century, and its ravages are still confined to the same districts in which it originally appeared, being unaffected by the settlement of the country or its consequences. It prevails with equal virulence in winter as well as in summer, and is unaffected by changes of weather, as respects dampness or dryness of the atmosphere. It occurs among beef cattle, sheep, horses, and goats. These animals are frequently affected with the disease without manifesting any of its symptoms until developed by violent exercise; a precaution always taken by persons who slaughter cattle raised in those districts in which the disease is known to exist. The appearance of the beef is not peculiar, though it has been supposed by some to be rather darker in its color, and to become sooner putrified than the flesh of sound cattle; there is nothing remarkable in the taste, nor are its poisonous qualities corrected by the ordinary process of salting.

The cause of the scourge is still involved in mystery; some conceive it to be of vegetable origin; others are of opinion that it results from the operation of a mineral agent. The symptoms and rapid progress of the disease in the cattle, and the effects produced on the human subject by the use of the flesh, milk, or butter of the animals thus affected, are thus described:—

When the disease is developed, food is refused, the vision is impaired, the eye becomes fiery red, the animal staggers and falls, or, if it attempt to rise, trembling of the whole muscular system prevents it from maintaining the standing position. After repeated convulsions, it dies, never lingering beyond a few hours. Sometimes death is produced in a few minutes, as if the animal had received a blow upon the head. If the flesh, milk, or butter of an animal affected with this malady, be used as food, in a space of time, varying from the third to the tenth day, a peculiar fœtor of the breath is noticed, which becomes greater as the disease advances, until it is fully developed, and then slowly disappears: loss of appetite, great pain, and excessive irritability of the stomach follow with general febrile symptoms and constipation: the brain becomes affected, the intellect impaired, and the strength exhausted by the constant vomiting, which, uncontrollable by any remedy, exhibits at first the contents of the stomach, then dark bilious matter or glairy mucus tinged with blood, and finally a black material resembling coffee grounds: the tongue becomes enormously swollen, the pulse rapid, pain increased, fœtid and bloody dejections ensue, and death soon follows, unless the disease be checked by appropriate treatment.

The disease thus produced proves fatal in the majority of instances; and in those who recover, convalescence is protracted, the patient having no recollection of the events during his illness, or even of occurrences that took place some days before the attack. The pathological appearances are thus described:—

Dissection reveals traces of inflammation in the coats of the stomach and intestines, with contraction in the size of these organs, effusion of serum into the peritoneum, dark engorgement of the liver, distention of the gall-bladder, and marks of high inflammation in the brain and its appendages.

The following is the course of treatment said to have been found most efficacious:—

Moderate venesection in the early stage, local depletion by cups, cold applications to the head, blisters over the region of the liver, and later on the upper portions of the sternum, nape of the neck, or on the scalp and the extremities: the exhibition of the more unirritating purgatives, as soon as the stomach is sufficiently composed to retain them, as calomel, either alone or followed by olive-oil, assisted by frequent enemata. The secondary fever which always supervenes, must be treated on general principles, adapted by the practitioner to the peculiar features of the case under his care.

A number of cases are cited by the Committee to show the dangerous effects produced by the use of the flesh of animals that have died of other diseases, or which has become unsound from any cause. The following is the conclusion to which the Committee came, and which they forcibly urge upon the authorities:—

> In conclusion, the Committee avail themselves of this occasion to urge upon the constituted authorities the absolute necessity of adopting some method which shall in future protect our citizens from occurrences of so dangerous a character. For this purpose they most respectfully propose the erection, by the city, of one or more extensive abattoirs or slaughter buildings, similar in plan to those erected by the French Government in 1809; and they would also suggest as an improvement to that plan, the appointment by the Common Council of the requisite number of competent persons, whose duty it shall be to inspect all animals slaughtered for the use of the city. By this arrangement, they are persuaded that the citizens would gain greatly by the security they would possess that the food consumed by them was pure and healthy; by the cleanliness which would be observed in the establishments; by the removal of the buildings which at present constitute offensive nuisances; and in the certainty that the system would be burdensome to none, but, on the contrary, would recommend itself on the score of convenience and economy.

It is sincerely to be hoped that the matter will not be permitted to rest here. Although, it may be true, as the Committee have stated, that the butchers are solicitous to protect their customers from the fraud which, with a horrible disregard of human life, transports these diseased animals to our cities, yet it is obvious that some authoritative provision is absolutely necessary. But supposing perfect security against the sale of the poisonous beef, how is the introduction of the milk, butter, and cheese from the infected districts, to be prevented? A great deal more must yet be ascertained respecting the causes of this epizootic. The physicians resident in the districts where it prevails are particularly called on to investigate the matter diligently, and accumulate as much information as possible.

Asylum Journal: Published every Tuesday, by the Inmates of the Vermont Asylum.—No. 1.

The following extracts,—to which with no ordinary degree of pleasure we give insertion in our columns,—fully explain the character and objects of the most interesting sheet whose title we have transcribed:—

> 'We would simply state, that the great object of this journal is the dissemination of correct views of the condition and proper treatment of the insane. Having been often considered insane, and more than once an inmate of a lunatic asylum, and having experienced in our own person the effects of different treatment, we hope we may be allowed to express our sentiments on a subject so important to this most afflicted portion of the community.
>
> 'We would respectfully solicit those and those only, whom the majority of mankind consider insane, to furnish communications for this journal. These communications will be subject to the supervision of a board of censors, chosen by the inmates of this asylum.
>
> 'As the editor, printer, and publishers of this journal are selected from ourselves, who give our time and labor for the benefit of our unfortunate inmates who suffer the double affliction of poverty and insanity, we hope to realize something which shall aid in their relief.
>
> 'We would most respectfully invite the editors and publishers of those newspapers to whom we send this journal, to send us theirs in exchange. Did they know the many weary hours their papers would beguile, and the relief and enjoyment that would be afforded to many suffering minds, they would feel amply compensated by the happiness they conferred. And may all who aid in relieving their afflicted fellow men, finally receive the favor of Him who has said—'Inasmuch as ye have done it to one of the least of these, my brethren, ye have done it to me.'

THE MEDICO-CHIRURGICAL REPORTER.

Ecchymosis from Injury simulating Laceration of an Artery of the part.

Dr. Houston communicated to the Surgical Society of Ireland, (May 14,) two interesting cases of accident, in which simple ecchymosis assumed so strikingly the symptoms of laceration of the principal artery of the part, as to render the diagnosis extremely difficult.

April 1, 1842.—James Bargett, a strong, healthy laboring man, was admitted into the City of Dublin Hospital. About two hours before admission, he had been struck and knocked down by an iron beam falling on his back and hams, and which was so heavy that he could not move until it was lifted off him. He complained of excruciating pain in the back, and inability to stand, or to move the lower extremities; but these were not paralyzed, as they still possessed sensibility. He has also voided urine since the accident. The right limb he describes as having been twisted under him at the knee, in the fall, so much that his comrades pulled it to set it straight. There was a palpable rupture of the internal lateral ligament of the knee-joint. The tibia could be pushed outwards, so as to separate the condyles of the tibia and femur from each other to some distance, and in being replaced suddenly, to produce an audible sound. The pain attending this motion was not great; neither was there much effusion into the cavity of the joint.

But the left limb is that respecting which this communication is here offered. In the left ham there was a swelling better than a foot in length, tense, and fluctuating, without particular pain on pressure—evidently, a great and recent extravasation of blood. It was soft, opposite the popliteal space, and firm and resisting above and below. There was no pulsation in it. The pulse in the anterior and posterior tibial arteries had ceased to beat. There was complete loss of sensation in the outer part of the leg and foot, corresponding to the distribution of the branches of the perineal nerve; and the foot was cold and slightly œdematous. The symptoms were, in short, so analogous to those likely to attend on a sudden rupture of popliteal artery and perineal nerve, that not one of the experienced gentlemen who saw the patient, would venture to say that such was not the nature of the lesion. The formation of such a tumor in less than two hours, from a blow capable of producing so much injury to the back and opposite limb—the stoppage of the pulse in the main vessels of the foot, and the loss of sensation, together with the coldness and œdema of that part, were all characteristic symptoms of such an injury.

As the man was faint and frightened, some warm wine and an anodyne were given, and cold lotions applied to the tumor. Under this treatment, time was given for the nature of the accident more fully to develope itself.

In six hours, the patient had rallied from his faintness, but there was no increase in the amount of extravasation. In twelve hours, the parts had remained in statu quo: the tumor was there, but had not increased: the foot was still pulseless and cold; but these conditions had not undergone any change or aggravation. It became now pretty certain, that whatever might have been the source of the extravasated blood, the main artery of the limb still remained unbroken, as with such a lesion as that, the symptoms must have, in some degree at least, made progress. On this head, therefore, our apprehensions were for the time, much relieved. In two days, the tension of the tumor began to lessen; and on the fifth morning, but not sooner, the pulse was discoverable again in both the anterior and posterior tibial arteries; although the diminished power of sensation remained the same as before. On the ninth day, there was considerable diminution in the size and resistance of the tumor; but there was extensive blackening from ecchymosis up and down the back of the limb. The pulse in the vessels of the foot had regained its strength, and there was some improvement in the sensibility of the limb. It is now six weeks since the accident, and the report is, that the tumor is nearly gone; that the circulation in the limb is perfect; but that the sensibility, although much improved, is not fully re-established. Considerable soreness in the ham, particularly along the inner side, the effects of the blow, remain.

Respecting the opposite knee—the subject of the laceration of the internal lateral ligament—I may state, that it was put up in splints in the straight posture, soon after the accident, and kept so for three weeks, when on examination, it was found so far improved, that while permitting the ordinary motions of flexion and extension, it was so strong as not to yield to a moderate force, calculated to bend the tibia outwards, and that it is now strong enough to give firm support to the limb, in standing.

As to the source of the blood poured out so rapidly and in such quantity, Mr. Houston observed that the fluid came most probably from some large vein, and was checked in its flow as soon as the tumor reached a size sufficient to make pressure on the open mouth of the vein which furnished it. The pulseless state of arteries of the foot and leg, the circumstance most worthy of notice in the case, may have arisen from the pressure of the extravasated blood on the trunk of the popliteal artery; and the loss of sensibility complained of in the outer part of the foot and leg, we may suppose to have been the result of a stretching of the perineal nerve, rather than of a rupture of that cord, as, had the latter been the nature of the lesion, a restoration of the nervous function would not have been so soon accomplished.

The second case of which Dr. Houston spoke was communicated to him by Dr. Martin, of Portlaw, and which, from its resemblance to the foregoing in several essential particulars, deserves to be recorded with it, although the region of the body engaged was different. A young woman, in a playful struggle with a fellow-servant, suddenly heard something snap, as it were, in her neck, and in a very short time observed a tumor in the lower part of the neck. The tumor increased, and on the third day, when Dr. Martin saw it, had attained a size of about half an orange. It lay an inch and a half above the right sterno-clavicular articulation, partly overlapped by the anterior edge of the sterno-mastoid muscle. The tumor pulsated violently, was painful, and interfered very much with deglutition. The pulsation in the branches of the carotid of that side, although not stopped altogether, was much weaker than that in the corresponding branches of the side opposite.

Notwithstanding the many points of resemblance which the case bore to one of carotid aneurism, Dr. Martin, from observing an absence of any bruit under the stethoscope, and noticing that the tumor, while appearing to pulsate, underwent no lateral dilatation or enlargement with the strokes of the pulse, diagnosed the case to be one of circumscribed ecchymosis consequent upon the rupture of some small vessel.

In five or six weeks the tumor disappeared, leaving no injurious effects behind.—*Dub. Med. Press.*

Injury to the Cartilages of the Ribs---Removal of a portion of them, and Cure.

M. L., aged twenty-eight, was admitted into the London University College Hospital, February 21, under the care of Mr. Liston. On the night of the 20th he took sixpenny-worth of laudanum for the purpose of self-destruction, but finding no effect from it he took a dinner knife, sharpened the point as well as he could on the hearth-stone, put it to his left side, rested the handle on the bed, and fell upon it. Says he tried to pass the knife between the ribs, but could not. There was some bleeding at first, but it soon ceased, and he tried several times to renew the bleeding, by pressing the knife into the wound, and moving it about. He was brought into the hospital at three, P. M.

He is a tall, powerful man, good conformation, sanguine temperament, light complexion, and red hair. Has a wound three-quarters of an inch in length in the left side of the ensiform cartilage, not far from the attachment of the diaphragm. The bleeding had ceased; the wound was dressed with water-dressing. Ordered to have a purgative pill, followed by a dose of castor-oil.

Feb. 22. Medicine has not operated; pulse 96, full, and rather inclined to be hard; breathes somewhat quicker than natural; great thirst; tongue covered with a white fur; wound painful, increased by coughing or lying upon his right side; mind much agitated; bowels open at four, P. M.

23. Pulse 104, soft and compressible; complains of pain in the wound on inspiration; less fever.

24. Improving; the wound has begun to suppurate.

26. Attacked in the night with violent pain in the side and dyspnœa; bled to forty ounces with considerable relief.

28. Health much improved; the wound discharges a dark colored matter, supposed to be the breaking up of a large coagulum. Made an out-patient on the 7th of March.

March 12. Returned to the hospital to-day, complaining that the wound of the side discharged a great deal on walking: walking and other exertion very much affected his breath, and caused a pain in his side, rather lower than the situation of the opening. Dressed with water-dressing, and a broad bandage to be applied round the chest.

14. Discharge continues very profuse; pressure on the parietes of the chest produces no increase of the discharge, though it may be distinctly seen to ooze out of the wound during a forced inspiration; his health remains good; tongue clean.

16. Mr. Liston passed a probe to the depth of at least two inches into the wound. A collection of matter is supposed to exist somewhere about the attachment of the diaphragm to the cartilages of the last true ribs. Ordered opening medicine.

18. Mr. Liston made a T-shaped incision, passing through the original wound, and on dissecting back the flaps a small opening was seen passing through the cartilages of the ribs where they are united together, to the left of the ensiform cartilage, through which the matter was seen to proceed. A circular portion of two cartilages, nearly the size of a shilling, was removed with a strong blunt-pointed bistoury, half an inch of the point being broken off, and a large quantity of healthy-looking matter gushed out. The bleeding was restrained by lint dipped in cold water, and the wound afterwards dressed with water-dressing.

19. No unfavorable symptoms; wound discharges freely.

20. Complains of pain on inspiration and uneasiness around the wound. Ordered three grains of calomel and one of opium every three hours.

22. Pain relieved; slight cough; bowels open.

25. Pain entirely gone, the wound contracting and granulating very nicely; health good; appetite voracious; tongue clean. Allowed to walk out every day.

30. Still improving in every respect.

April 8. Discharged cured.

Parturition under Unusual Circumstances.

At a recent meeting of the Medical Society of London, Mr. Linnecar related the following case:—

He was requested to see a lady, about twenty-six years of age, pregnant with her first child, and within about five weeks of her full time. He found her suffering from an enormous swelling of the right leg, which was enlarged from the foot inclusive, upwards to the trochanter major; the nymphæ and labia, but particularly the former, were much enlarged, and projected and rested upon the thighs; the general health was good, but her sleep was disturbed by a peculiar catching in the limb while she was dreaming of swimming in the air. The cellular tissue of the affected parts was so much dis ended that several punctures were made in the nymphæ, from which a considerable quantity of fluid oozed. Several punctures were subsequently made in the leg below the knee, from which, also, there was a considerable discharge of serum. The enlargement, however, still continued; inflammatory action came on round the punctures in the leg; and it became a question whether it would not be advisable to produce premature labor. This latter step, however, was rendered unnecessary, as labor came on naturally last Saturday, on which day Mr. Linnecar was hastily summoned to his patient. On his arrival he found the membranes had already ruptured, and the head of the child was presenting; the uterus could be distinctly felt to be acting when the hand was placed on the abdominal parietes, but the patient experienced no pain whatever. The usual pains came on, however, as the pressure on the perineum increased, and the child was born alive. There was scarcely any discharge whatever during the labor, and there was none of the usual lochial discharge. There was, however, a most copious discharge of water from the uterus as well as from the leg: the leg and thigh that morning (Monday) were diminished in size, but the cuticle of the leg was dead, and there was a kind of purulent secretion underneath it; with this he had not interfered; the leg was tender; the pulse about 100, and small. There was no secretion of milk. Looking at the facts he had stated, that there was no pain during parturition, and no natural discharge during or after the labor; he thought such a state of the system was indicated, that a fatal result to this case must be anticipated. In all the cases which he had seen of labor occurring without pain, the mother had fallen a sacrifice. He thought the presence of pain was a beautiful provision of nature for the preservation of the offspring.—*London Lancet.*

Post-mortem Examination of the Body of Timothy Daly, killed by a Pistol-bullet.

The body was well-formed, and in good condition. A considerable quantity of blood had flowed from the wounds, so as completely to saturate the flannel-waistcoat which he wore next his skin. There was a bullet-wound of a round shape, and of the size of a sixpence between the seventh and eighth ribs of the left side, and another on the right side over the last rib.

Head.—The skull-cap, skull, and dura mater, were quite healthy. The arachnoid membrane and pia mater were slightly congested, but they were not thickened, nor was there more than the natural quantity of fluid effused beneath the membranes and into the cavity of the ventricles. The substance of the brain was quite healthy.

Chest.—There were some slight adhesions between the costal and pulmonary portions of the pleura. The lungs were perfectly healthy, and uninjured. The heart was also uninjured, and all its parts, including the valves, were of the natural and healthy structure. The blood was universally fluid, but there was none extravasated into the cavity of the chest. The seventh and eighth ribs on the left side were fractured; the last rib on the right side was also fractured. The diaphragm, with the exception of a few of its muscular origins from the ribs on the left side, was quite uninjured.

Abdomen.—The stomach was removed and examined: it was distended with half-digested food. There was an aperture with blackened edges, of about the size of a shilling, an inch below the junction of the œsophagus with the stomach on its posterior surface, and another corresponding aperture on the anterior surface of the stomach, also at the cardiac end, but lower than the aperture on the posterior surface. The liver was perfectly healthy and quite uninjured. The intestines were also uninjured and healthy.

The thoracic and abdominal portions of the aorta were carefully examined, but were found to be quite uninjured, nor was any important vessel wounded.

In this case death occurred almost instantaneously after the discharge of the pistol; and must have been caused by the sudden shock given to the nervous system by the passage of the bullet through the distended stomach. No other cause of death can be assigned, for no other viscus was wounded, nor was any important vessel ruptured.—*London Lancet.*

Ulcer of the Thorax communicating with the Right Lung, in a case of Pulmonary Consumption.

Mary Cain, æt. 31, of fair complexion and scrofulous diathesis, had been a patient of mine (Mr. Allen) for some time. In the beginning of last winter, she had an attack of inflammation of the right hip-joint, there was lengthening of the limb, accompanied with very severe pain; this gave way to repeated local bleedings, and the occasional use of iodine, quinine, and morphine; however, she was confined to her bed from this cause during a great part of the winter, during which time she had occasional attacks of cough with slight hæmoptysis, and became much emaciated. On examining the chest the upper part of the left lung appeared nearly solid; the upper part of the right was also dull on percussion; in March she regained flesh, and became so much improved, that she was able to leave the house: unfortunately she caught fresh cold, and had a return of the cough with profuse expectorations and perspirations; but there was no pain or uneasiness in the hip-joint. Early in May a scrofulous ulcer (which she had previously been troubled with) broke out on the right side of the thorax; it quickly put on a phagedenic character, and rapidly laid bare a portion of the fourth and fifth ribs. The glands in the axilla, on either side, suppurated. On the 25th of May my attention was directed by the patient to the curious noise that came from the ulcer, like (as she said) a person breathing. On examination I found that at each expiration a considerable portion of air was expelled through the ulcerated opening, sufficient to extinguish a piece of lighted paper; there was also a portion admitted at each inspiration. This was readily perceived by placing a piece of lint over the ulcer, which could be seen to be drawn inwards during the inspiration. She continued to take quinine and morphine, from which she felt, or fancied she felt, relief. On the morning of the 24th of June she had been left alone for a short time by the person who usually attended on her; on the girl's return she found the bed deluged with blood, which was flowing freely from the ulcer on the chest; the blood (as she expressed it) 'pumped out' when the woman breathed or attempted to speak. She died in about ten minutes, having, it was supposed, lost about two quarts of blood. No examination of the body was permitted.

This case may be interesting from its rare occurrence. The annual number of consumptive cases in this parish is very large, but during four years I have not met with a similar one.

Dr. Edward Harrison (who has seen a great deal of this disease, and who has paid particular attention to it) informs me that he has never met with a case where the external ulcer communicated with the lung. The woman lived one month from the time the communication was first observed.—*London Lancet.*

THE COLLATERAL SCIENCES.

[FOR THE NEW YORK LANCET.]

THE CRYSTALLINE LENS.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. I.

The crystalline lens is the middle and most powerful magnifier of the eye, and from its simplicity of shape, component parts, and position, we should infer that a very few words would suffice to explain its character and use. But this is not the case, for the lens also has been the subject of great diversity of speculation, and what is very extraordinary, the most distinguished philosophers have fallen into the most fanciful errors concerning it.

This lens, like the other humors—aqueous and vitreous —is perfectly transparent, but much more dense and firm than either. It is about the third of an inch wide and two lines thick in the centre, tapering off to the circumference so as to form a double convex surface, the posterior side being more convex than the anterior. In consistence it is like soft glue, but perfectly colorless, and, as is well known, transparent. When the outer layer is removed, and the nucleus is pressed together, it loses its transparency, and resembles spermaceti.

It is enclosed in a very curious case, or, as it is called, capsule; here it remains in situ, without coming in contact with the case either at the axis or edges, for it floats, or rather is suspended in a fluid called the liquor Morgagni. The specific gravity of this fluid being greater than that of the lens, causes the latter to be suspended in the centre, and unless there is some external violence, such as a blow on the eye, it can never change its place.

But though it is considered as the most powerful magnifier of the eye, *yet it is less essential to vision than any other part of the visual apparatus*; for when extracted, an external artificial lens or a pair of spectacles can supply its place. It is a glutinous and albuminous secretion, and is generated within the capsule; for we know, on good authority, that if it is extracted without lacerating the capsule more than is required for the expulsion of the lens, it will form again, and vision be perfectly restored.

Mr. Middlemore, ophthalmic surgeon to the Birmingham Eye Infirmary, assures us in his valuable treatise on the diseases of the eye, that in rabbits, when the operation has been well conducted, the lens forms again in the course of a few months. 'The new lens,' he says, 'is a secretion from the capsule, slightly consistent when first produced, but gradually acquiring increased solidity. The period which may elapse from its first visible formation to its complete development, varies in different animals, but in rabbits the average period is about six months. I have removed a regenerated lens in a tolerably complete state, after having extracted the original one only three months previously. I have never yet detected lamellar arrangement in the newly formed lens, nor does it divide into three parts by the applications of acids, or heat, neither can any thing like a lamellar arrangement be detected in any part of the texture, at least as far as I have been able to ascertain.' 'I question if it be possible for the lens to be regenerated in an eye upon which the posterior operation of solution has been properly and efficiently performed. At all events, that degree of injury is visually inflicted upon the crystalline capsule which absolutely prevents the reproduction of the lens.' 'The conclusions at which I have arrived are—1st, that the lens may be reproduced if it be carefully extracted from the eye without materially injuring the capsule, or exciting much inflammation; but—2d, that many actions, such as the destruction or extensive rupture of the capsule, the accretion of its two hemispheres, the supervention of acute inflammation, and so on, may interfere with and prevent its reproduction.'

As Mr. Middlemore is an authority of great value, and as the facts have been corroborated by others, it must be taken for granted that the lens, like the hair, nails, membranes, blood and other secretions, can be reproduced. This certainly adds stronger proof that a regenerative principle exists in the system, and that the secretions are the media through which it operates—*not to produce new organs* but to advance the growth of those already formed, and to nourish and repair others which have been injured. In the lower order of animals, and in certain plants, this reproductive principle is endowed with a more extensive power, for it is capable of stimulating the secretions so that no new organs, *the germs of which exist in ganglia,* can shoot out. In plants this principle exists also, for if a twig is broken off at the articulation and planted, the secretions force out the embryo roots from the 'bourrelet,' or ganglion at the articulation, and a new plant is formed.

In men, however, as well as in other animals of perfect organization, a *limb* or vital organ is never reproduced. But we know that ganglia can be formed where none ever existed before, and that blood vessels attach themselves to them and ramify thence. In cancers, fungi, and indurated tumors, vessels are arranged around and through them, not for the purpose of *obtaining*, but for supplying them with nutritive matter. These tumors are certainly excrescences, and are not only useless but absolutely injurious.

If, therefore, excrescences, such as tumors, wens, and calculi, are generated by a deposition of secretive matter in such parts of the system as are in a morbid state and incapable of repelling injurious action, it may readily be inferred that a glutinous substance like the isolated, undetached crystalline can be reproduced. There is less difficulty in the way of its renewal within the capsule because this is its natural birth place, and every thing is ready to assist in its development. After an operation such as Mr. Middlemore describes, presuming it is well conducted, the capsule is immediately filled with the liquor

Morgagni, and the lighter particles arrange themselves in the centre of the fluid. In a short time layer after layer is deposited and the whole lens is formed, thus filling up the entire capsule with the exception of a small space around the lens for the above-named secretion.

It is often the case that when the cataract has been successfully extracted, vision is restored, not immediately but in the course of a year, so that spectacles can be discarded. Almost all oculists have cases of this kind on record, and the inference must be that a new lens has formed in the capsule. How else shall we account for the improvement in vision, for no one can for a moment suppose that this arises from the humors having acquired some new power. Post-mortem examinations could settle this question, but how few surgeons or oculists take an interest in such curious phenomena?

Sometimes, in consequence of feeble action in the ducts which convey the liquor Morgagni through the capsules, small nuclei are formed in the fluid, and these float about and disturb vision. These opaque objects I have described under the head of Muscæ Volitantes, and I hope their nature and presence has been accounted for in a satisfactory manner. There is a glutinous viscidity in these vitiated portions of secretive matter which resist the solvent power of the liquor Morgagni, for in soft cataract, the lens on being cut up, can be entirely removed by the absorptive power of the humors. In my opinion, the viscid matter to which air bubbles attach themselves, can only be removed by opening the capsule of the lens at the bottom that the fluids may run out.

As to the organic structure of the lens, what credit can we attach to such a theory after this fact of reproduction? But let me quote from Dr. Young, and then with one of Chevallier's good microscopes, look for the muscles and tendons which Dr. Young supposes to exist in the crystalline. Let us search, likewise, for the sixty-two thousand five hundred million of teeth which Sir David Brewster says connect together the fibres of the lens of the cod fish!

Dr. Thomas Young observes:—'The crystalline lens of the ox is an orbicular convex transparent body, composed of a considerable number of similar coats, of which the exterior closely adheres to the interior. Each of these coats consists of six muscles, intermixed with a gelatinous substance and attached to six membranous tendons. Three of the tendons are anterior, and three posterior; their length is about two-thirds of the semi-diameter of their coat; their arrangement is that of three equal and equidistant rays, meeting on the axis of the crystalline; one of the anterior is directed toward the outer angle of the eye, and one of the posterior to the inner angle, so that the posterior are placed opposite to the middle of the interstices of the anterior; and planes, passing through each of the six, and through the axis, would make, on either surface, six regular and equi-distant rays. The muscular fibres arise from both sides of each tendon; they diverge till they reach the greatest circumference of the coat, and having passed it they again converge, till they are attached, respectively, to the sides of the nearest tendon of the opposite surface. The anterior or posterior portion of the six, viewed together, exhibit the appearance of three penniform-radiated muscles. The anterior tendons of all the coats are situated in all the planes, and the posterior ones in the continuation of these planes, beyond the axis.'

I have given the above extract entire, to show how far a sensible mind may be misled by optical illusions, particularly when there is a preconceived theory for which facts are wanted. Dr. Young was of opinion that the crystalline altered its shape when the eye moved from far to near objects, and that this was accomplished by a contraction of the lens from the circumference to the axis, so as to make it more convex when the object was near the eye. As to the membranous tendons and muscular fibres, is there any one on whose accuracy we can depend, who has ever seen them? For I hold those experiments made upon boiled or indurated lenses, as not worthy of a moment's consideration. Heat and acids alter the texture, character, and diameter, of any substance submitted to their action, and in engaging in an inquiry of this kind, it should always be borne in mind that every organ, membrane, tissue, or secretion, expands and contracts according to the peculiarity of its form and organic structure; and according to the menstruum in which it is immersed.

When Sir David Brewster made known his discovery of the teeth and fibres of the lens of the cod-fish, I had entire confidence in the truth of the experiments. While examining the crystalline of the cod in its boiled state, I thought it a good opportunity to look at these teeth, tendons, and fibres, but alas! I saw nothing that resembled them.

At one time I thought I had really detected a regular organization, and the way was this. I had been examining a fresh lens, just from its capsule; on its accidentally slipping from the glass on which it rested, it fell on my finger, and being very soft, part of it adhered to the nail. To get it off, I rubbed it on a thin glass slider, just passing my finger along the glass. On examining it with a good lens, I was surprised to find that the glutinous particles had arranged themselves in a regular and beautiful order, and presented what might be considered as a perfect organization. In fact, many who saw this curious phenomena, firmly believed that it was the real structure of the lens; nor could they be undeceived, until I produced the same result by touching the glass with the glare of an egg, or calves' foot jelly.

If a little pellicle of the soft lens, about the size of the head of a large pin, be smeared across the glass, either by the finger or a feather, there will be alternate rows of large and small globules connected together like a string of beads. See figure O. If the observer is not careful in adjusting the axes of the eye, the lens and the slider, so that they are parallel, instead of globules there will be serrated edges, apparently locked in one another; but the moment the axes are parallel, alternate rows of large and small globules are seen. It is of no consequence whether the substance is rubbed along the glass horizontally, circularly, or in a wavy line, the appearance is the same, the globules follow the track of the finger in the most beautiful and regular manner.

Now both this and the experiment made by Sir David Brewster are the result of evaporation, and can easily be accounted for upon that principle. But it is not alone the *nucleus* of a boiled or hard lens, that exhibits the serrated edges and fibres, of which Sir David Brewster speaks, for the outer lamina, also, if a very thin fraction be chipped off, will have the same configuration when examined by a lens. In fact, the shrinking of the parts is continued throughout, and each layer is similarly affected.

Independently of the regularity of the iridic lines, or 'fibres,' as seen in figure O, there is another set of them, but of a different tracery; these can only be seen on a flat surface, such as is obtained when the lens is split through the layers. The first set or iridic lines follow the curvature of the surface, but the second set is only found on the flat surface. These are of different forms, but the predominant one is somewhat like that in figure O, interspersed, irregularly, by little, detached striæ of no definite shape.

When a fluid containing salt, or any other substance, is spread thinly over a glass, we infer that the shooting out of crystals is caused by electric agency. It is well known that each fluid menstruum produces crystals peculiar to itself, and they are always of the same character under any circumstance. In the lenses of fishes this variety of iridic and irregular tracery is very remarkable; the cod differing from the bass, and the bass from the shad; but it sometimes happens that the tracery differs in the lens of the same kind of fish, not so much varying in character as in regularity. This, I presume, is owing to the longer or shorter term of immersion in a hot fluid, or in alcohol or ammonia, or to the unequal action of the cold air upon the surfaces of the different laminæ, when taken out of the hot fluid. Be this as it may, it is certain that the process of evaporation affects the lens of the same kind of eyes differently at different times.

Among other crude assertions about the lens, is that of the uniformity of the external cracks, made by the shrinking of the outer, or opake layer of the lens. These layers, or rather the lens, is said to split *triangularly*, and in no other way. Now, although I have frequently seen these triangular cracks or divisions in lenses, yet in a number, collected at random, there were as many split into quarters and halves as into triangles. In fact, I have now in my possession upwards of three hundred lenses, of *flesh*, *fish*, and *fowl*, and the triangular cracks do not prevail to such an extent as to warrant the conclusion that the lens always cracks in that way.

There is another curious fact respecting the boiled, or indurated lens. The outer layers are *always* opaque, and shell off from the central, *transparent* nucleus, just as the shell is removed from the hard-boiled egg. Now whether these layers are deposited by a weaker solution of the liquor Morgagni, or whether the astringency, pungency, or heat of the fluid in which the lens is immersed, acts instantaneously only to a certain depth of surface, I know not; but certainly the texture, quality, and consistence of the outer layers, are very different from the central portion of the lens.

Heat, undoubtedly, acts very differently at different stages of its temperature, or when its application is varied. For instance, if a fresh egg is put in cold water over the fire, and the kettle is made to boil, the albumen after a few minutes will coagulate, and become white, hard, and opaque. But if the kettle is taken from the fire the moment the water boils, and a fresh egg is put in it, on the hearth, by the time the temperature of the water is lukewarm, the albumen instead of being white, hard, and opaque, will be almost transparent, while the yolk will be sufficiently cooked.

Heat is the active agent in producing this whiteness and opacity of the albumen, both of the egg and the lens. But whatever be the latent cause, the facts are so, and we know that this change from a jelly-like consistence to opacity and hardness, does not depend upon any particular quality or property of a fluid, for the same change takes place in boiling water, in any other heated fluid, and in dry, hot ashes.

We perceive, therefore, that all the phenomena of the boiled lens, do not depend upon an organization allied to vitality, for the lens possesses no peculiarity which may not as well belong to substances of other forms. The only organization proper to it, is its lenticular shape and lamellar arrangement. It has neither central nor peripheral action or impulse; and as it is completely insulated, it can only act as a reflecting, refracting, and transparent medium, receiving nothing from without but light. It is preserved from a contact with its capsule by the liquor Morgagni, which fluid acts as a lubricator.

ITEMS AND INTELLIGENCE.

Purity of Atmospheric Air.

A paper on the nature of the air which we breathe, under various circumstances, was read. The author, M. Leblanc, has directed his attention principally to an analysis of the air in rooms, hospitals, &c.,—in fact, in all situations wherever it is vitiated by the congregation of persons. He begins by showing that the air of an empty room, the doors and windows of which are not closed, is precisely the same as that out of doors. This is, of course, natural; but he states also that he found the same to be the case in the *closed* green-houses of the Jardin des Plantes, a seeming contradiction, which he explains by the absorption of the plants contained in them of the carbonic acid of the air, and the giving out again of this air purified by the plants which had absorbed it. But in one of the wards of the hospital of La Pitié, the doors and windows having been closed, the quantity of carbonic gas—that destructive element to human life—was found to be tripled, as compared with what it was before the room was closed; and in one of the sleeping rooms of the Salpetrière, the quantity of carbonic acid in the morning, the doors and windows having been closed during the night, was eight times greater than in the open air. In the great lecture room of the Sorbonne, after a lecture of an hour and a half, one per cent. of oxygen had disappeared, and and been replaced by one of carbonic acid. The quantity of carbonic acid in one of the écoles d'asile of Paris, after it had been closed for three hours, whilst the pupils were taking their lessons, was found to be precisely the same as in the experiment at the Salpetrière. At the Chamber of Deputies, he found the quantity of carbonic acid vary from two to four parts in a thousand. The latter amount approaches the limit at which respiration becomes oppressive and injurious. In the latter portion of M. Leblanc's paper, he gives an account of some experiments with air, deteriorated by the burning of charcoal.—*Paris Academy of Sciences.*

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Nov 12, 1842.

29 Men, 44 Women, 43 Boys, 26 Girls. Total, 142.

DISEASES.

Apoplexy	2	Intemperance	0
Asthma	1	Inflammation	0
Asphyxia	0	Of liver	2
Aptha	1	Of bladder	0
Abortion	0	Of brain	2
Bleeding	1	Of stomach	5
Bleeding from stomach	0	Of throat	2
Bleeding from lungs	0	Of lungs	9
Burned or scalded	1	Of bowels	2
Cachexia	1	Of heart	0
Cholera infantum	1	Of bladder	0
Child-bed	1	Insanity	1
Congestion	1	Jaundice	0
Consumption	29	Killed or murdered	0
Convulsions	6	Lues Venera	0
Croup or hives	2	Mortification	1
Cancer	1	Malformation	0
Debility	6	Marasmus	2
Delirium tremens	0	Measles	2
Diarrhœa	4	Old age	6
Death from poison	0	Organic disease of heart	1
Dropsy	5	Palsy	0
Dropsy in head	5	Retention of urine	0
Dropsy in the chest	0	Rheumatism	0
Drowned	0	Spinal disease	0
Dysentery	4	Suicide	0
Erysipelas	1	Sprue	0
Eruption	0	Small-pox	2
Fever	3	Tumor	0
Scarlet	2	Teething	0
Typhoid	4	Ulceration of intestines	1
Puerperal	1	Unknown	4
Remittent	4	Ulceration of throat	0
Billious	2	Ulcers	0
Inflammatory	0	Varioloid	1
Intermittent	0	Whooping cough	7
Hip Disease	0	Worms	0

JOHN H. GRISCOM, City Inspector.

City Inspector's Office, Nov. 14, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, NOVEMBER 26, 1842. No. 22

LECTURES.

LECTURES ON PHYSIOLOGY.

BY ROBERT NELSON, M. D.,

Late Professor of Physiology and Surgery, and Chief of the Hotel Dieu Hospital, Montreal.

REPORTED FOR THE NEW YORK LANCET.

Lecture I.

1. Before we inquire into the laws and functions of the body, we must become acquainted with the elements out of which it is composed. After learning this much, we may venture a step further, and examine the structure of parts, a knowledge of which naturally leads to the discovery of their use; but, as the various parts of the body are designed for two purposes only—the preservation of the individual and the perpetuation of the species—they are more or less related to, and dependent upon, each other; hence flow a multitude of accidental influences which interfere with the pure function of an organ, and which are the agents that disturb health. Here lies the proximate cause of disease.

ELEMENTS.

2. *Matter* is said to be something which is *impenetrable*, consequently occupying space;—which is *extensible*, consequently it is divisible.

3. *Impenetrability*, is proved by this—that one body cannot be made to occupy the space which another fills without displacing it; for if matter were penetrable, one body might be forced into another, and the two would fill no more space than one did; in this way the whole universe would become infused into a mere atom. We need not pursue the doctrine of impenetrability any further, as it may be dispensed with on the present occasion.

4. *Extensibility*, or divisibility, which is the same property, is deserving of our greatest attention; for it is this property of matter which lies at the bottom of all the phenomena manifested in the works of creation.

5. To illustrate the palpable extensibility or divisibility of matter it is customary to refer to the art of gilding, or even that of making gold leaf; 282,000 of which leaves laid upon each other will make a pile only one inch in height; and 1500 will equal a thickness no greater than that of a leaf of paper. Another palpable example of the vast extensibility of matter without losing any of its properties is afforded by the spider, a thread of whose web, four miles long, weighs only one grain.

6. Another example of the divisibility of matter is seen in the diffusion of color. A grain of indigo will tinge a large quantity of water.

7. A still greater example of the wonderful divisibility of matter is recognizable by the sense of smell. It is said that one grain of musk will scent a room for twenty years without perceptibly losing weight. The cedar of a common pencil will continue to exhale odoriferous particles for many years and scarcely diminish in weight.

8. These several palpable, ocular, and olfactory examples of the vast divisibility of matter, not only prove how minutely it may be reduced, but also how wonderfully acute is our power of perception; for, to be conscious of the presence of matter, it must strike a sentient part of our body. We recognize the gold leaf and the spider's thread by feeling, the tinge of bodies by the color they reflect, and the odor of substances by the small particles of their bodies which they continually exhale, and which come in contact with the olfactory expansion.

9. Another example of the extent to which matter is reduceable without losing its sensible properties, and one which is more applicable to the illustration of structural formation is found in animalcula. We are astonished, not only when we contemplate the diminutive size of these animals, but still more so on beholding that they are possessed of viscera and limbs; and that even these lower parts are complicated as to structure, since they perform movements which our knowledge of the higher animals shows are effected by special agents. Thus:—

10. The motive organs in serpents consist of a set of intercostal muscles, which, connecting rib to rib, by their contraction draw the ribs together, from the tail towards the head, alternately on one side and then on the other; in this way, drawing their body undulatingly forward. If we descend in the scale of creation one degree lower—to the eel or water serpent—we shall find that progression is effected by the same mechanism as in the serpent, because both these animals are of the same type; but in this species the ribs have stopped short of their completion—they have advanced only as far as a cartilaginous structure. Descending still lower in the scale of creation—to lumbrici, at first sight the whole structure appears homogeneous; but on closer examination, we discover the very same mechanism that was so striking in the serpent—striking because he has grown to the ultimate point of perfection which appertains to the type of animals of which he is a species. But, in descending to the water serpent, we found that the ribs were imperfectly formed, only rudimentary; for the same reason, because all the laws of creation are only progressive links or degrees of the same genetic power, we now find in the worm; that the ribs which were disappearing in the eel, have now quite vanished—that is, the creative power has not yet attempted their formation. Having gradually followed the form of the agents of locomotion in the ophidian type down to animals of so primitive a step in creation as are the lumbrici, we find ourselves prepared to understand that it is by a similar agency to the one already described, that the vibrio performs his locomotion. How infinitely small must not the *agency* of a whole segment be! to say nothing of the parts which compose that segment! But the contractile substance—for we cannot call it muscle—of one of these little animals, is yet infinitely smaller in almost all the infusoria, than in the vibrio we have just contemplated. We need see but once the rapid, yet regular and designed movements of the cilia of the Leucophrys, to be struck with amazement at the wondrous hand of the Creator.

11. If we turn to another type of animals—insects—and observe them as we have the ophidian, we shall meet with farther proof of the integrity of matter, although it be reduced infinitely small. Commencing with the lobster, and going through the species of crab, of ephemeris, of grasshopper, pediculus, pulex, and the acarus scabei et casei, we

cannot fail to be struck with the generality of form and movement which prevail through the whole type; and as we have positive proof that the agents of motion are muscular fibres in all those species which are large enough for demonstration, we must infer that the same agency prevails through the whole type, even to the smallest species. These remarks and demonstrations prepare us for the consideration of the next subject.

12. *Atom* is a particle of matter which cannot be further divided. We may form some conception of the diminutive size of an atom of matter by what has been said of animalcula; for it is evident that their smallest organs are made up of an assemblage of whole atoms of matter.

13. We need not trouble ourselves with the abstract consideration whether or not there is a term to the divisibility of matter, or whether the theory of atoms be correct or not, since it is a subject that can never be discovered. We must still cling to the theory of atoms, for we know of no other that can afford us an equal facility of expressing our ideas concerning the elementary condition of matter to others, and of comprehending theirs on the same subjects, and on the formation of bodies.

14. *Inertness*. Ponderable matter is absolutely inert by itself, its properties being always inherent and essential. Any power it may manifest is derived extrinsically—that is, from the action of some other body upon it. Example: If a body move, it does so from having absorbed *momentum* out of some other body. If a solid body become fluid, or a fluid one become solid, they do so by receiving or parting with caloric.

15. *Permanence* of matter. Although the extensibility (4) of matter is almost infinite, and the theory of atoms (12) is more an abstract than a physical truth, neither of them can lead us to believe in the destructibility of matter, for every attempt at annihilation, even of the smallest particle, is vain; and if there were no other proof of permanency than that of impenetrability (3), it alone would be quite sufficient. We must therefore feel convinced that whatever IS will continue to be, and doubtless ever WAS; at least as regards any theory or matter of reasoning in relation to *us*.

16. Matter is subject to three great powers. 1st. Inertia; 2d. Attraction; and 3d. Repulsion. Although these permanent truths are commonly called physical laws to distinguish them from what are called chemical and vital laws, they are nevertheless constantly present and contending against each other even in living bodies. It is barely necessary to mention them in this place, although a thorough knowledge of them is so essential to the surgeon, and the ignorance of them is the cause of so much false and superficial reasoning, bad practice, and consequently undue suffering to the patient.

17. Our power over, and our knowledge of matter, show that it is not all of one kind, but of several kinds, each of which chemists have called an element from the permanence of its character. By destructive analysis they have not been able to reduce all manner of substances to which they have access to a less number than fifty-five varieties, always possessed of identical and invariable properties, and hence called simple or elementary bodies. All known bodies, however diversified they may be, consist of one or more of these elements variously combined.

18. Physicians have divided the consideration of matter into two great classes, the ponderable and the imponderable. The latter is often treated of, not as matter, but as a *condition* of matter. Whatever doubts may exist on many points of fact, it is certain that the imponderables do incorporate themselves with the ponderables, and when this happens a very perceptible alteration in the ponderables is made manifest.

19. Of the whole number of ponderable elements only nineteen are alleged to enter into the composition of organic bodies. These have been variously classified by different physiologists; and by Tiedemann thus:—

20.

			A. *Non-metallic.*	
Animal vesicle.	Vegetable vesicle.	Water	1. Oxygen.	
			2. Hydrogen.	
		......	3. Carbon.	
	....		4. Azote.	
			5. Phosphorus.	
			6. Sulphur.	
			7. Iodine.	
			8. Bromine.	
			9. Chlorine.	
			10. Fluorine.	
			B. *Metallic Substances.*	
			11. Potassium,	Alkaline metals.
			12. Sodium,	
			13. Calcium,	
			14. Magnesium,	Earthy metals.
			15. Silicium,	
			16. Aluminum,	
			17. Iron.	Proper metals.
			18. Manganese,	
			19. Copper,	

21. Out of these 19 ponderables 15 are only accessory, but are not essential, to organization, while the remaining 4 are indispensable in the construction of even the most insignificant animal; and only 3 to the rudimentary vegetable. They are—

1. Oxygen,	in the proportion to form water,	Elementary vegetable tissue.	Elementary animal tissue.
2. Hydrogen,			
3.	Carbon,.......		
4.	Azote,..........		

22. None of these ponderable elements, however they may be mechanically combined, or chemically united, are capable of forming either a vegetable or an animal. It is certain. then, that some other element, or elements, should unite with them in order to create an organic being.

23. *Imponderable* elements. These are admitted by physicians to be four in number. 1. Electricity; 2. Caloric; 3. Light, and 4 Magnetism.

24. After treating of the material properties of these four elements, I shall venture, for the sake of Physiology, to add a fifth to the number. In doing so, I may excite surprise, perhaps alarm; but I trust that the advantages it will yield to us will be such as to excuse me and to outweigh ancient prejudices.

25. Some philosophers do not consider these imponderables in the light of bodies, but rather as phenomena produced by certain alterations in the state or condition of matter; and this view of the subject has recently received some support by the late brilliant discoveries in electro-magnetism.—They even go so far as to suppose that the whole four are identical, and that the apparent difference between them is only another form in which they are made manifest. This hypothesis may or may not be true; but if true, it will be an instance of a violation of the law of analogy,—a fact which seldom happens. Inertness, attraction, and repulsion, are doubtless '*conditions*' of matter; but we never find them producing such strikingly diversified phenomena as distinguish the properties of one imponderable from another. Whatever may be the reality of this subject, I shall consider these elements as if they were substances; for in this light we shall find less difficulty in conveying our ideas to others, and in receiving theirs. For instance,

26. We are made sensible of the existence of the imponderables only when they are united with palpable matter; for, in their independent or separate state, they escape our notice. But that they do possess an existence apart from matter, is presumable from what we know of light. Light is emitted from its source in straight lines, but is not perceptible unless its rapid flight be arrested by an opaque body, or that it darts immediately into the eye. A stream of light passing through etherial space, cannot be seen. We may look through it and not see it, though we see objects beyond it. This fact is verified to us every night and during eclipses, when we look at the stars and planets. It is also verified to us in many other ways, even in the day time; for we can look through a large stream of light without seeing it, and yet be able to see the letters in a book placed beyond it, exactly as if no such light intervened. If there were no opaque matter

to intercept the rapid flight of light—to retain it long enough for the eye to *feel* it, the sun himself would shine in vain, and we be plunged in utter darkness, although swimming in a flood of light.

27. The above facts show that light possesses the substantial property of matter; the daguerreotype—even the direct accumulation of light on bodies which are hermetically closed, support this idea. The same facts, but in a stronger degree, hold good of caloric; for we cannot add it to one body without taking it from another one, nor can we banish it from one body unless there be another to receive it. It must then appear evident, that the imponderables, like the ponderables, *are indestructible, and consequently have a permanent existence some where,* but are not always perceptible to our senses, the latter being comparatively of too gross a nature to perceive the former unless accumulated in a sufficient quantity to act upon us.

28. When a solid body becomes fluid, it does so by absorbing caloric from some other body. When it loses its fluidity and becomes solid, it does so by yielding up the caloric it possessed to some other body which has less. When a fluid body becomes gaseous, it does so by absorbing a further quantity of caloric, *vice versâ.* What has just been said in regard to light and caloric is applicable to electricity.

29. When bodies combine, electrical phenomena are set in evidence. The electrical states of bodies differ from each other, and this difference must cease, must be brought to a common term, when they combine, else the new body could not be a unity.

30. It is evident that these imponderables both associate with ponderables and depart from them. It is also known that caloric exists in a *latent* state, that is, in a passive state in bodies; and although we cannot say the same thing, with as much evidence, of light and electrity, there are too many instances where this is the case to leave a doubt on the subject.

GENETIC OFFICE OF THE IMPONDERABLES.

31. Without the influence or presence of the imponderables, the ponderables will persist in their inertness. It is their presence which marries brute matters together, making one out of many.

32. It was the first four imponderables that engendered out of chaos the sea and the land—the rock and the ruby; and to all appearance these four alone rioted in undisputed power for ages ere their fifth brother claimed his share in the strife. They preside at and control the *brute* unions of all ponderables.

33. Examples. Oxygen and hydrogen may remain for ever in company—mixed with each other, but will not unite unless one or more of the imponderables effect the bans.

34. Even sugar does not dissolve in water, nor can the simplest union take place without the intervention of an imponderable.

35. Water itself cannot pass from the solid to the fluid, and *vice versâ,* without such presence, without the intervention of both caloric and electricity.

36. The electric interference has been strikingly shown by Faraday. When one end of a rod of iron is heated, its electrical state varies, and during this time nitric acid will not act upon the other end. While the wire is a positive *electrode,* the acid cannot act upon it; but when wire is placed at the negative end of the battery, it is acted upon violently. These facts are additional proof of the axiom that ponderable matter is absolutely inert.

38. Let us now advance one step further before we inquire into Life. Chemists have long since established it as a doctrine, that bodies unite with each other in definite proportions:—as 1 A with 1 B; 1 A with 2 B; 1 A with 3 B, &c. This theory implies that these unions cannot take place in any variable proportions.

39. A second doctrine is—these unions are effected directly, as

1 sulphur with 1 oxygen makes hypo-sulph. acid.
1 ...". . . ."..2 . . .". . . .."..sulphurous acid.
1 ...". . . ."..3 . . .". . . .."..sulphuric acid.

Whether this doctrine be true or false, it has answered the most exact calculations in the arts; but as regards organic chemistry, it has been the source of great limitation.

40. The latest and most important doctrine regarding definite proportion in unions, is that which is called the Compound Radical Theory, thus:—

Sulphur . . . . . = A 1+Ox. 1 = B Hypo-sulphurous acid.
Hypo-sul. ac... = B 1+Ox. 1 = C Sulphurous acid.
Sulphurous ac. = C 1+Ox. 1 = D Sulphuric acid.

Professor Graham has extended this theory even to the formation of the various salts, but it is unnecessary for me to do more than mention it.

41. Whether this compound radical theory be correct or not, it certainly gives us greater facility in conceiving the operations which take place in organic chemistry, than the old method did.

42. An additional doctrine relative to chemical unions, is that which has reference to the operation of the influence which the presence of certain bodies exert on each other. This is called Catalysis. An example of it is found in the effect which spongy platinum exerts on hydrogen with oxygen, at a temperature in which no union could otherwise take place.

43 This catalytic action is supposed to be very common in the organic kingdom. The fermentive influence of yeast* has been attributed to this power, because none of the yeast appears to be consumed in the process of converting the saccharine matter in a fluid into the alcoholic or acetous fluids.

44. Since it is demonstrated that the union and separation of ponderable matter cannot happen independently of the intervention of one or more of the admitted imponderables, analogy suggests that a higher order of union will require the aid of a another and a higher order of imponderables. When one brute body combines with another, the presence or aid of an imponderable is always seen; it is either caloric, electricity, or light, but such a combination leaves the product *brute* matter.

45. When a higher order of creation is worked out of brute matter, Nature employs not only the imponderables mentioned, but further calls for and employs the assistance of a higher element—Life.

LIFE.

46. Whether life be a distinct element, capable of union and separation from matter, and consequently of an independent existence, like the four imponderable or incoercible elements—Electricity, Light, Caloric, and Magnetism—or is only a condition to which matter is sometimes subject, I shall not stop to contest; for, on the one hand, if we consider life to be only 'a condition' of matter, or a peculiar state of being of matter, we shall find ourselves puzzled at each step we take in the pursuit of physiology; but, if we contemplate the phenomena, which take place in living matter, as the effect of an adventitious element acting on it—that is, look upon life as a *substance* added to matter, as we look upon light, caloric, electricity and magnetism in regard to matter, we shall be able to *formulize* physiology with some of that certainty with which physicians formulize any other physical phenomenon.

47. By possessing a comprehensible idea—as it were—a tangible one, regarding life, we are able to reason *sensibly* on the phenomena which living matter manifests, and thus discard whole libraries of metaphysical physiology, which is the soul, the essence, the basis of all medical discrepancies, and the bane of medical practice.

48. Captious persons and such as are wedded to their previous education may say, 'before you assert that life is a distinct element, accessible to and separable from matter, *show us some.*' The reply is

---

* Yeast is Torulæ Cerevisiæ. 'As soon as five or six vesicles are formed in each group, the fermentation is sufficiently advanced for manufacture, and then he checks it. The vegetation of the yeast is then suspended, and the groups of vesicles separate into individuals, the mass of which constitutes the yeast thus greatly increased in amount.'

easy, and is to be found in the analogies which belong to the four admitted imponderable elements. If this do not satisfy the stubborn, they can accept the assertion as they would any hypothesis in the absence of fact, and use it as a theory. In this way, they may get rid of that which is offensive to them, and at the same time acquire possession of an instrument wherewith to reason satisfactorily.

49. The early promulgation of the theory of 'the vacuum,' though denounced as a damnable heresy, was silently accepted by many of the faithful, because it afforded them a more easy mode of treating the subject of pneumatics than any other. The same as regarded the theory of attraction. Every body knew, long before the birth of Newton, when a body lost its support it fell to the earth; but no one was able to reconcile *all* the phenomena attendant upon the descent of the body until *he* said that it was due to the attraction of the earth—that the apple was drawn down—that if there were no power to *draw* it down it would remain where it was though unsupported. Now, he could not *show* the *form* of this power; but once that the hypothesis was admitted, it became easy to reason upon the facts which accompanied it, and to declare what were its laws, and to calculate their force with exactitude. If the same credit be given to the hypothesis that life has an independent existence, it will afford facilities in the study of physiology which we shall seek for in vain elsewhere.

50. As far as our observation extends, we know that all finite things are incapable of change by themselves; and when they are altered even in appearance only, this alteration is the effect of something else which has acted on the body, or ceased to act on it. Therefore, when matter assumes a living state, or loses that state, it has necessarily received, or lost something different from itself.

51. We must admit then, we know, that there is such an element as life; and that, like the other imponderables, light, caloric, and electricity, it has two states of existence, the *passive* and the *active*.

52. The passive state must be believed as a consequence of the active state, for this is subject to cease; and when the active state of a body ceases, that power which gave it activity, having departed from its abode, must find one elsewhere; for we know, by comparison, that what is, will continue to be (15), for nothing can be destroyed; therefore,

53. Life has two states of existence—1st, the passive, which, like that state of the other imponderables, is diffused in and around bodies—ambient about the surface of this planet, and perhaps a little way within its surface. 2d, in the active state, which is too patent to require elucidation.

54. There is no more impiety in this view of life, than there is in the theory of attraction; for are they not both of infinite creation? and are they not means employed by Omnipotence. If life be not an instrument of Omnipotence, what else is it?

55. The active existence of life is only seen when it is combined with matter; and in this state it acts in obedience to laws which are as invariable as are any of the physical laws.

56. In its marriage with ponderable matter it dissolves *almost* all the brute affinities which belong to ponderable matter, and produces a new being—a vegetable or an animal—possessed of properties, and subject to new laws which are very different from those which previously appertained to the materials out of which the new structure is raised.

APTITUDE.

57. There is an aptitude and affinity to union ever prevalent between certain combinations of ponderable matter and life. The moment a particle of such a combination is favorably disposed to combine with life (that it is moist and warm enough) it assumes a new form, a lichen or a zoophyte is created; so that the hypothesis of Malte-Brun is in truth more of a reality than a poetical assertion.

58. As an analogy of the aptitude of ponderable matter, when favorably disposed, to combine with an imponderable, we may look to the spontaneous detonation of the ioduret of ammonia. [It must be borne in mind that both these substances are abundantly obtained from living bodies.]

59. Mould, mucor, fungi, and lichens appear to spring into existence, under certain circumstances —[the three first in the dark.] It is asserted that all these bodies are the product of seed or sporules, in contradiction to the assertion of spontaneous birth, because they are seen to produce seed, or sporules which grow into their similars. But this argument will not bear a stricter scrutiny than that of spontaneous birth; for do not these beings die, and revivify? Even highly organized beings die, and revivify.

60. Examples of revivification, which is an analogous action to spontaneous generation. 1st. Will not a moss dry so as to be capable of being reduced to powder and be sifted, in which state can it be supposed to be living? an absolutely dry body to be living? Now this is a common occurrence to moss. It alternately dries for months at a time, when its growth is null, and again is wetted by rains or dews when it grows again. So inversely of the ioduret: it dries to a certain point, at which it struggles for a time, receives an atom of caloric and explodes. While the lichen is wet it grows; but losing its moisture it parts with life, and of course ceases to grow; but if again moistened, it regains life and grows again. These alternating states of life and death play with low organizations many changes. What occurs to the moss occurs to the fungus, which grows on decayed wood.

61. The same thing happens to the *eggs of some butterflies* deposited on the twigs of trees in high latitudes, where the most intense frost does not 'kill' them, though it dries every atom of moisture out of them, in which state they may be kept for years, and resume life when exposed to moisture and heat.

62. This 'suspension of vitality,' or rather destruction of vitality, is even more remarkable in seeds. If they be dry, the most intense cold will not injure them; but if they contain any moisture, and are exposed to cold in this state, it will expand by freezing, and as this expansion takes place in a great many parts of the seed, this last will be in consequence torn in its pacenchyma in so many places that, when it thaws, it will consist of many particles divided in part from each other like flour, though still contained within a common envelope; now, it is well known that a seed, which is the ovum of a plant, will not grow if much injured in its texture—flour will not sprout. Besides the lacerating power of frost, the changes which the ice undergoes when it thaws are of a chemical nature, and tend to the saccharine, and are followed by the alcoholic and acetous fermentations.

These remarks must be sufficient to refute the belief which some people have that seeds may remain many years a few inches under ground without perishing. It is in this way they attempt to account for the fields of mustard, clover, and even forests which suddenly spring up, after the arrestation, by fire, or the plough, of the previous growth.

63. If the seed be kept dry, it will sprout and grow as vigorously, after a lapse of thousands of years, as the wheat found in Egyptian mummies proves.

64. Not only vegetables die and recover life, but highly organized animals do the same, as the Rotifera, may die and be kept in this state for years, and when moistened will quickly recover life. Some of the Annelides also will act in this way, as the Vibrio tritica, Gordius Aquaticus, or hair worm, and the Filiaria, or thread parasite, which infests the horse's eye.

65. Life acts on health like caloric. When caloric is added to an appropriate imponderable, it will vanquish the inertness of the latter; but to be able to do this it must, in the first instance, be in sufficient quantity to *saturate* the imponderable to a certain point, else its power will fall short.

66. Examples. If a live coal, containing a large quantity of caloric, be brought into contact with a combustible, it will first part with so much of its caloric as will saturate the combustible to a certain

point; after this is attained, if it has still more caloric to spare, it will continue to impart a further quantity to the combustible, until the latter has reached the point of ignition. But if the quantity of caloric be less than these degrees, it will fall short of igniting its neighbor; and by having diminished its own quantity, that which remains will be inadequate to continue its dominion over the coal, and this also will cease to burn, or die. Having so saturated its neighbor and produced ignition, a new movement is created in the latter—it has acquired life, and this, if in sufficient quantity, will feed on all the carbon within its reach, increasing in strength as it draws more food within its rapacity, increasing from a spark to a conflagration—from an atom to an oak—from an albuminous organic atom to a whale—to an elephant—to man. Such has been the progressive march of nature from the moment that organization was called out of chaos until now. And what reason have we to suppose that the creative fiat of God has ceased? None!

67. The quantity of life, as well as that of caloric, must therefore exceed a certain amount, or it cannot overcome the inertness of matter. Place a shovelful of live coals on a hard cold floor—they will die; on a warm soft wood floor, they will not only live but give life to the floor;—or splinters of the cold hard floor, it will also enliven these, because the proportion of dispensable caloric is sufficient for both parent and associate; a soft wood coal will not ignite *cold* gunpowder. In high latitudes, and in cold weather, the spark from a flint is not proportionably hot enough to ignite the powder in the pan of a gun-lock.

GLEANINGS FROM THE FOREIGN JOURNALS.

The Structure and Use of the Malpighian Bodies of the Kidney.

Mr. Bowman, of King's College, in a paper read before the Royal Society, has described the results of his examinations of the structure and connections of the Malpighian bodies of the kidney in different tribes of vertebrata, and has shown that they consist essentially of a small mass of vessels, contained within dilated extremities of the convoluted uriniferous tubes. The tube consists of a transparent membrane, lined by epithelium, which, where it is expanded over the tuft of vessels, constitutes the capsule described by Müller. The renal artery in its subdivisions forms the afferent vessels of the Malpighian tufts, each of which, after it has pierced the capsule, divides and subdivides, terminating in convoluted capillaries, which are collected in the form of a ball, from the interior of which proceeds the solitary efferent vessel, passing out of the capsule by the side of the single afferent vessel. The efferent vessels, on leaving the Malpighian bodies, enter separately the plexus of capillaries surrounding the uriniferous tubes, and supply it with blood. The plexus itself lies on the outside of the tubes, on the deep surface of the membrane which furnishes the secretion; and from it the renal vein arises by numerous radicles.

The solitary efferent vessel of the Malpighian bodies, the author describes under the name of the portal system of the kidney, and compares them with the same system in the liver, both serving to convey blood between two capillary systems. These afferent vessels, having to supply the plexus of the cones, which is at some little distance, are often large, and divide themselves after the manner of an artery. They are portal veins in miniature.

Mr. Bowman proceeds to found on his previous observations, and on other grounds, a theory of a double function of the kidney. He conceives that the aqueous portion of the secretion is furnished by the Malpighian bodies, and its characteristic proximate principles by the walls of the tubes. After giving in detail his reasons for entertaining this view, he concludes by referring to the striking analogy between the liver and kidney, both in structure and function, and by expressing his belief, first, that diuretic medicines act specially on the Malpighian bodies, and that many substances, especially salts, which, when taken into the system, have a tendency to pass off by the kidneys with rapidity, in reality escape through the Malpighian bodies; secondly, that certain morbid products occasionally found in the urine, such as sugar, albumen, and the red particles of the blood, also, in all probability, pass off through this system of capillaries.—*London Lancet.*

Albumen in the Urine.

Albumen exists in the urine under four principal conditions, and its presence then may render the diagnosis of the existing affection obscure.

1. Albumen appears in the urine in the course of several acute febrile diseases, or of those in which functional disturbances to a certain amount exists. In cases of this kind the quantity of albumen is in general very trifling; it appears very irregularly, disappears to return, or to cease completely. Under these circumstances, the quantity of albumen is not in general sufficiently great to render the distinction of the case difficult.

2. Albumen exists in the urine, as an attendant upon certain diseases of the heart, and some cases of pulmonary emphysema; its presence apparently depends upon mechanical hyperæmia of the kidneys. In such cases the quantity of albumen is not greater, or of greater constancy and regularity in its appearance, than in the former. If, however, the impregnation become considerable, we are almost warranted in affirming that Bright's disease complicated the cardiac lesion.

3. Albuminaria exists in certain dropsies depending especially upon a morbid state of the blood, and which, when far advanced, lead to œdema of the kidneys. Such is the state of things sometimes in children, who become the subjects of dropsy after scarlatina. Here no affection of the kidney exists except œdema, and the diagnosis may be rendered obscure by the anæmic character almost constantly presented by the urine. The distinction of the cases will be grounded on the fact that, in that now referred to, the appearance of albumen does not occur until after dropsy has set in, that the quantity voided is generally much greater than in Bright's disease, and finally, that it appears only temporarily, and often irregularly. The diagnosis would be almost impossible, and it would be nenessary to procrastinate before pronouncing an opinion, if the quantity of albumen discharged became tolerably abundant, and the observer had had no opportunity of examining the urine from the outset of the disease.

4. Albumen exists in the urine of some individuals who are perfectly healthy. Upon this it must be observed, that the first symptom of Bright's disease is albuminaria; the morbid changes of the blood, and the consequences of these, are consecutive phenomena. It may, then, be the fact that the presence of albumen announces the development of Bright's disease, although there are no other symptoms of the affection present. The subject so affected appears in the enjoyment of health, but at a later period will appear the characteristic phenomena of Bright's disease. It is, therefore, necessary to be on the watch in cases where albumen is voided by individuals apparently possessed of sound health. However, I observed for six months, at the Hôpital de la Charité, a strong, robust, and vigorous infirmary man, whose urine constantly contained a large proportion of albumen. The other properties of the fluid were normal. He was sent away at the end of six months, but I ascertained he filled the same office at la Pitié a year after. Whether he is destined to have

Bright's disease at a future period, I am unable to affirm.—*Brit. and For. Med. Rev.*

Infanticide.

Mr. Taylor has published a medico-legal report on a case of infanticide, which occurred in 1840 at St. Albans, and in which a former pupil of his, Mr. John Coales, was concerned. The child, a female, had evidently attained maturity, and had perished by strangulation. It was twenty-four inches in length, its weight a little more than eight pounds. The middle point of the length of the body was rather above the umbilicus. The circumference of the thorax was thirteen inches. The fingers were firmly clenched, the nails blue, the mouth open, and the tongue large, dark, and protruded. There were several true ecchymoses about the face and scalp. On removing the towel, by which strangulation was effected, and which was passed three times round the neck, drawn excessively tight, and tied in a knot behind, the neck was found very much compressed, the larynx and trachea quite flattened, and the whole neck squeezed into a remarkably small compass. There were deep marks produced by the folds of the towel, with little ridges corresponding to the furrows of the folds. There was little or no ecchymosis; the ridges just mentioned were rather red, the other parts of the skin being quite pale and white. There was a strong line of demarcation between the red and white portions, corresponding to the upper edge of the towel. There was not any blood in the blood-vessels of the neck, where the napkin was applied, but the jugular veins just above were quite full. The lungs completely filled the chest, and overlapped the pericardium, and completely covered the arch of the diaphragm. The edges were obtuse and rounded, and clusters of cells, distended with air, could be perceived all over the surface of the lungs. The heart was healthy and natural, the right cavities gorged with fluid blood. The lungs, heart, thymus gland, and trachea, were removed altogether, and placed in clean soft water at 60°. The lungs floated, completely carrying the heart and the organs attached with them. About one-fourth of the surface of the lungs appeared above the level of the water. The brain was congested. From these facts, the surgeons considered that the child had arrived at maturity, had been born alive, and was destroyed by strangulation soon after its birth. The jury, however, acquitted the mother, finding her guilty of the minor offence, concealment of the birth, for which she was sentenced to two years' imprisonment.

In pursuing this important investigation, Mr. Taylor performed a series of experiments on the dead bodies of newly-born infants, some of which had respired after birth, others had been still-born. The experiments were fifteen in number, including several instituted by Dr. Geoghegan, and had reference chiefly to the signs of maturity, the relative weight of the lungs and body, the hydrostatic test, the state of the ductus arteriosus, the foramen ovales, the umbilical cord, &c. From the results furnished by this investigation, he comes to the conclusion that Ploucquet's test, depending on the relative position of the lungs compared with that of the body, is not even capable of furnishing corroborative proof, and that it would be unsafe to rely upon it. He adds, that in a paper published in the 'Edinburgh Medical and Surgical Journal.' Dr. Guy has come to a similar conclusion, from an examination of cases, derived partly from his own experience, and partly from that of others. The average weight of the lungs before respiration, the child having arrived at or near maturity, is 649 grains; after respiration, 927 grains, supposing the process of breathing to have been perfectly performed. This increase in weight after birth is commonly ascribed to the altered course of the blood under the establishment of the respiratory process, and to the fact that more blood circulates through the lungs after than before respiration. In an earlier communication, Mr. Taylor published certain conclusions which he had drawn from experiments then made with respect to the artificial inflation of the lungs, which were afterwards confirmed by Mr. Jennings, of Leamington. He was then of opinion, that in artificially inflated lungs the air might be forced out by compression, where the pressure was applied not to the entire, but to the divided lung. This experiment had succeeded in all cases, even where the lung had been violently inflated after removal from the thorax, though in this case it was a difficult process, and required several repeated compressions. The air might in like manner be forced out of lungs which had imperfectly respired, and as these did not differ in weight from the fœtal standard, there were no means of distinguishing artificial inflation from imperfect respiration in newly-born infants. When respiration had been perfectly established, the air could not be forced out by compression without entirely destroying the structure of the organ. The result of more recent inquiries has, however, led him to be less inclined to depend on this test of compression; he says it is too uncertain to allow of its applicability to the extent which previous experiments would have justified. The force of legal objection, respecting artificial inflation, clearly consists in the degree given to the lungs, *in situ*, of a still-born child, where the air is propelled for the purpose of resuscitation, a task of exceeding difficulty, as is well known; the greater the violence used, the less likely is the air to pass into these organs, but it rather finds its way through the œsophagus into the stomach and bowels. Any attempt at inflation can be readily distinguished from perfect respiration, by a practitioner acquainted with the subject, but there are not any means by which it can be recognized from imperfect or feeble respiration.

Chaussier gives as a sign of maturity that the opening for the umbilical cord corresponds to the centre of the length of the body; but the cases brought forward by Mr. Taylor would rather show that the umbilicus is from a quarter to half an inch below the centre in infants arrived at maturity.

Among the signs of the birth of a living child is mentioned the presence of a circle of redness at the junction of the umbilical cord with the skin of the abdomen; but this criterion is not a perfect one, for in five of the cases described by Mr. Taylor, all of them still-born children, the red circle was found, while cases have occurred of living children born without it. The contraction of the ductus arteriosus has been usually considered a positive evidence of live birth, although it strictly depends on the degree of respiration established. Dr. Geoghegan, in two cases of still birth, noticed a slight contraction about the centre of the vessel; but this is a point, in Mr. Taylor's opinion, requiring further investigation. He has never met with any alteration in its calibre in bodies where respiration has not taken place.—*Guy's Hospital Reports.*

Re-union of the Fingers.

M. della Fanteria attended a young girl who had two fingers cut off by accident while engaged in domestic affairs. He found the fingers in some bran, in which they had fallen; but, to his great surprise, they were both cut into two pieces. He, nevertheless, determined to re-unite them to the hand, which he effected by strapping and sutures. At the end of a few days union was perfect, and the poor girl thoroughly recovered the free use of her fingers, the articular motions continuing. This case is verified by the celebrated Vacca, and by Professor Centofanti. —*Annali Universali di Medicina.*

Extirpation of the Uterus.

Rosa Gazzola, 38 years old, was attended in her fifth confinement, in 1837, by a *soi-disant* sage femme. She was delivered, but after the expulsion of the placenta, she suffered from intense uterine pains, and a feeling of weight in the vagina. The midwife examined her, and stated that these pains were caused by the presence of another child in the uterus. In pursuance of this opinion, she introduced her hand into the vagina, said she felt the child, seized it, and made great and forcible traction. The patient felt that she was being lacerated; four strong men were holding her, while the midwife continued her efforts at traction. At last, after unheard-of efforts, the pretended child was dragged out of the vagina, and the midwife remarked that the nates were born, the rest of the body was behind. In order to aid her efforts, she wrapped up the protruded portion tightly in a handkerchief, and continuing to pull, she finally tore away the entire uterus from the body of the unfortunate mother.

Dr. Peracchi, who was sent for, found tremendous hæmorrhage,and the patient constantly fainting. She appeared like a corpse, the pulse could not be felt, a large quantity of bowel protruded through the vulva, and the vagina was full of coagula of blood. The doctor was much alarmed at the state in which he found the unhappy sufferer, and still more so when he ascertained the womb had been torn away. He returned the bowels, raised the pelvis, &c., and had recourse to cordials; the patient gradually revived; fever set in, requiring bleeding, &c.; and the poor woman finally recovered.

At the period when the catamenia should be present, Gazzola suffers from general prostration, oppression, vomitings, headaches, and abdominal pains. Her hair has fallen, the face is pale, the muscles thin, and, as it were, atrophied; the voice is harsh and disagreeable; speech difficult. The vulva is natural, the vagina about three inches long, and terminating by a thin yielding cul-de-sac. At the antero-superior part of the canal is an irregular, hard, and painful cicatrix, about an inch and a half long. The urine and fæces pass with difficulty and pain. The examination of the organ showed it was completely torn away, together with the Fallopian tubes and broad ligaments.

The midwife was proceeded against criminally, and sentenced to one month's imprisonment and a small pecuniary fine.—*Annali Universali di Medicina.*

Leucorrhœa in Children.

This complaint may arise from two very different causes, the one, an internal cause, depends on the influence of a weak, lymphatic, or even scrofulous or rachitic constitution, and is far from uncommon among the children of the lower orders. This kind of inflammation of the vulva may proceed to gangrene. The second cause is the result of a direct mechanical irritation, such as onanism, and attempts at precocious copulation, more or less imperfectly accomplished. The discharge in these last-named cases may be gonorrhœal or syphilitic. The diagnosis of the cause is not unfrequently exceedingly difficult, but the practitioner will derive assistance in forming an opinion, by noting whether there be present on the external parts of generation any ecchymoses, lacerations, or excoriations; whether the vulva is dilated and driven in, as it were, the hymen ruptured, or prolapsion of the urethra present. Under these circumstances there is presumptive evidence of an attempt at violation; the evidence is, however, only presumptive, not positive, for the girl may have produced these appearances herself by practising masturbation. If the discharge, then, is not accompanied by any syphilitic symptoms, we cannot conclude positively that attempts at violation have been made. Whenever, however, the child has chancres in addition to the leucorrhœa, the case is scarcely doubtful. It is important to distinguish the chancre from the ulceration which follow the separation of sloughs, the chancre being an evident characteristic of syphilis, and capable of direct transmission. The constitutional appearances must be taken as a guide in forming a diagnosis. Where rachitic or strumous characters are plainly marked, a sufficient cause for the discharge will be found, without attributing it to impure connection. The results of the treatment will be of still more service, for the leucorrhœa or constitutional origin cannot be cured by local remedies. The preparations of bark, the bitters, iron, and iodine, with gelatinous, salt, or sulphurous baths, and good diet are requisite in addition to the use of topical measures.—*Guersant, fils, Gazette de Hopitaux.*

Necrosis of the Os Calcis.

M. Mallespine, who has examined a great many cases of necrosis of the os calcis in children, states that, although generally dependant on a constitutional cause, it remains a long while without affecting the other bones of the tarsus, and that, in general, the only operation needed is the extraction of the sequestrum, instead of the amputation of the leg. This latter operation, he says, is more frequently practised than needs be, because the tumefaction of the cellular tissue, which is sometimes enormous, the situation of the fistulous openings at a distance from the os calcis, and the lateral mobility of the foot (the result of the destruction of the os calcis, whereby the heel has lost all power of resistance), induce the practitioner to consider the disease more advanced and more extensive than it really is. He observes, further, that the absorption of the sequestrum takes place very rapidly, and that the new bone destined to supply the place of the diseased one, is deposited in the first instance on a level with the insertion of the tendo Achillis, and at the point corresponding to the calcaneo-cuboid and astragalo-calcanoid articulations. The articular cartilages are not destroyed, and generally continue intact a long while; the ligamentous apparatus is generally found friable, softened, and thickened; occasionally, appearances have presented, as if nature were about to supply the place of the lost ligaments by a fresh apparatus.—*Revue Médicale.*

Dysentery.

The time has been when dysentery raged in London like a plague. The present Dr. Heberden, in his valuable essay 'On the Increase and Decrease of Different Diseases,' shows that in the 17th century the number of deaths set down in the weekly bills of mortality, under the titles of bloody flux and griping in the guts, were never less than 1000 annually, and in some years exceeded 4000. For twenty-five years together—viz., from 1667 to 1692, they every year amounted to above 2000. During the last century the number gradually dwindled down to 20. Dysentery is one of the pests of hot climates. In all tropical regions, at certain seasons of the year, it is very prevalent and destructive. But it is in fleets and armies, and especially among troops in actual service, that the distemper most displays its terrible power. There is no single malady which is so crippling to an army in the field as this. Sir James McGrigor, to whom was entrusted the superintendence of the medical department of the army, on the two greatest services on which the military force of this country has of late years been employed—namely, that in Walcheren and that in the Peninsula, calls dysentery 'the scourge of armies,' and 'the most fatal of all' their diseases. In two years and a half the British army in Spain lost no less than 4717 men by this complaint.—*Dr. Watson, Medical Gazette.*

Encephaloid Tumor.

M. Jelapi was consulted by a woman, forty-six years old, having a scirrhous tumor in her left breast as large as a good sized apple. He advised its extirpation, which she refused to consent to, and he saw no more of her for a year, when he was again sent for. The tumor was then as large as a man's head, and there were points of ulceration on its surface, whence was discharged an acrid, corrosive, fetid liquid. The patient was confined to her bed by almost constant accessions of fever. Nevertheless, the tumor being perfectly mobile, no swelling under the armpit, and the viscera generally healthy, an operation was decided on, and agreed to by the patient, as the only chance for life. Dr. Melito operated, and the tumor, when removed, weighed 4 kilogrammes 750 grammes. The tumor consisted of an external layer of lardaceous tissue, and internally of encephaloid matter. The operation was perfectly successful, and at the date of the report, three years and a half after the operation, there were not any signs of relapse. The patient was directed to take the dulcamara and the fumitory for some time after the operation. The important fact in this case is the permanent cure, of for at least three years and a half, of a cancerous tumor, ulcerated when its extirpation took place.—*Il Filiatre Sebezio.*

Fissure of the Rectum.

A lady, 30 years of age, suffered for two years from a most painful fissure, about an inch long, situated in the posterior paries of the rectum. Defecation was exceedingly painful, and during the last six months of that time she experienced a sensation of burning, and troublesome pulsations in the part, for three hours after each evacuation. Opiate enemata, and belladonna applications had been had recourse to in the country, but with only momentary relief. Under these circumstances, Messrs. Bretonneau and Trousseau prescribed simple lavement, to be followed, immediately after it had been returned, by one composed of 4 scruples of extract of ratanhy, 1 scruple of alcohol, and 120 of water. Each day this was used the patient was enabled to retain the enema a longer time, and there was progressively less pain during and after each evacuation. In sixteen days the patient was completely cured. Six months have elapsed since the date of this case, and no relapse has taken place. The extract of ratanhy lavement was administered once a day.—*Bulletin Général de Thérapeutique.*

Iodine in Hydrocele.

Owing to a serious accident, the infiltration of the injection in the cellular tissue of the scrotum, which happened in a case in the Native Hospital, Calcutta, under his care, Mr. Martin was induced, in 1832, to abandon the old operation, and, in the next case that presented itself, to have recourse to an injection of the tincture of iodine diluted with three parts of water. Of this, two common urethra syringesful were used, and retained, the scrotum being moved about so as to bring the fluid into free contact with the entire surface of the vaginal cavity. The case was perfectly successful, and since then, 2,393 cases have been so treated at the Native Hospital. The advantages of this operation over the others are considered by Mr. Martin to be, that it is more simple, more certain, and more easily performed; that serum has not in any case been reproduced; little care is required in the after treatment; the cure is effected in a shorter time; and the operation is entirely free from the risk of infiltration, owing to the quantity of injection being comparatively small, and from its being retained within, and applied to the cavity of the tunica vaginalis. The inflammation produced by the iodine solution attains its maximum in a shorter period, and subsides sooner than that caused by any other stimulant. Comparative experiments with the iodine, port wine, tincture of cantharides, sulphate of zinc, &c., show the marked superiority of the former. The iodine seems to exert its constitutional, as well as its local action, for a few hours after the operation a nauseous, coppery taste is generally complained of.—*London Lancet.*

Opium in Rheumatism.

The remedy which, in acute rheumatism, stands next in importance to bleeding and purging is opium. If, by the means already mentioned, the pain has not been very much mitigated within forty-eight hours, or, I should rather say, if any pain then remain, opium should be had recourse to in doses sufficient to give relief. On the average, two grains in the course of the twenty-four hours are sufficient; and I have been led to believe that the solid answer better than the liquid preparations. How much opium may be taken with impunity, or even with advantage, so long as its usual effects are counteracted by the presence of pain, I am not prepared to say, but I have often given four and sometimes six grains in twenty four hours.—*Dr. Macleod on Rheumatism.*

Dr. Corrigan states that he has known two hundred grains of opium taken by one patient in fourteen days for rheumatism, without the supervention of narcotism.

Congenital Ununited Fracture.

A boy, ten years of age, was admitted into the hospital la Pitié, under the care of Lisfranc, having from birth an ununited fracture of both bones of the right leg in the lower third, as also a contracted tendo Achillis, the leg being, as it were, turned back upon itself, so that he could not walk without crutches. The first step taken by Lisfranc was the division of the tendo Achillis, after which he succeeded in slowly lengthening the muscles by repeated traction with orthopœdic apparatus, so as to bring the broken portions of bone in apposition. Further proceeding, he thought, was contraindicated by the weak, lymphatic appearance of the child, which could not support the operation requisite to cause union between the broken bones. Under these circumstances, Lisfranc had an apparatus made by M. Absil, surgical mechanician, composed of pieces of metal and leather straps, which, having its point d'appui on the pelvis, should support the bones and keep them in contact, and thus enable the boy to walk perfectly and without support, as if the bones had not been broken.—*Bullétin Général de Thérapeutique.*

Diagnosis between Palpitations from Cardiac Disease and Chlorosis.

Chlorotic Palpitations.—Puberty and female sex predispose—come on with other signs of chlorosis or anæmia—come on suddenly, and depart equally so—have perfect intermissions—are worst after bodily and mental excitement, and at the period when the menses ought to appear:—remit, under the measures which relieve the other chlorotic symptoms—stimulants, as iron, relieve—complexion pale, without lividity.

Palpitations from Cardiac Disease—are hereditary, precede the cachectic color and appearance of the patient—never depart, but continue always with more or less violence:—stimulants aggravate—lips and cheeks livid.—*Brit. and For. Med. Rev.*

Derangement of the Primæ Viæ.

When the motions are ill-colored or foul, it is in this country always inferred that the liver is out of order, sluggish, or congested, or something else, and recourse is had to the grand nostrum of quack-salvery. You may rely on it that this is very much a crotchet of British practice, a sort of insular superstition. Mercury is no more a panacea in these alleged hepatic disorders than in any other; many medicines promote the evacuation of yellow, &c. fæces, which is the admitted and only test of the presence of bile that is always available; for example, croton and castor oils, aloes, iodide of potass, rhubarb, &c. I do not object to the use of mercury in such cases, but to the exclusive reliance on the metal, and that hankering after gray powder and other mercurials that infest the British nursery. Foul discharges arise from irritation of the mucous membrane, more than of any other tissue or organ, and over such irritation the fondest mercurialist will admit that his favorite remedy has no peculiar power.—*Dr. Clendinning, London Lancet.*

Strangulation of the Penis by a Ring.

A boy, having passed his penis through a steel ring, the organ soon became so swollen and inflamed that it could not be withdrawn. The following plan was adopted for its removal, under medical superintendence, with perfect successs:—A very strong thread was passed beneath the ring by means of a curved blunt needle; the end that was nearest to the pubes being held firmly with the left hand, the other portion was twisted tightly round the glandular portion of the organ, so as to exercise a degree of constriction on it. The thread was then gradually unrolled, commencing with the end held in the left hand, and by this process the ring was steadily withdrawn on the spirals of the thread, as on a screw. The same plan might be adopted with respect to rings on hydropic and gouty fingers.—*Gazette Médicale.*

Annular Contraction, or Stricture of the Aorta.

John H., aged 38, was admitted with nodes and extensive ulcers; he became icteric, and, after a few weeks, was carried off with severe bronchial obstruction.

The body was well formed, slight, and moderately fat. A little fluid was found in the pia mater. The lungs were large, full, œdematous, and a little emphysematous. The larynx and trachea contained a very abundant muco-purulent secretion; the bronchi contained a tenacious dull mucus. There was a slight fibrinous effusion of pericarditis. The heart was of good size; the left ventricle was somewhat too thick; the mitral valve a little ossified, and also the aortic crescents, which were only two, but seemed to act well. The ascending aorta was dilated. The end of the arch (close above the ductus arteriosus) presented a fine simple annulus, which would not admit the little finger. The great arteries of the arch were not large. To the right of the constriction, the aorta was decidedly narrow and thin, and beyond it rather bulbous, thick, and atheromatous; one or two intercostal arteries seemed wide and unequally thick. The liver was enlarged, and close textured; a calculus obstructed the neck of the gall-bladder; the spleen was large and fleshy; the kidneys were somewhat mottled, and their tubuli contained sabulous matter.—*Lond. and Edin. Monthly Medical Journal.*

Spasm of the Stomach.

You will meet sometimes with what is called spasms of the stomach (and I suppose it is such) in gouty people, who are then said to have gout in the stomach. The pain comes on in sudden and severe paroxysms, and is removable in general by laudanum and stimulants—brandy, for example, or by the mustard poultice. On these cases, however we look with jealousy and apprehension. In some instances the attack is really inflammatory, and would then be aggravated by a stimulant treatment.—*Dr. Watson's Lectures.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, November 26, 1842.

We have long been desirous to direct the attention of the profession in this country, to the great importance of making a united and persevering effort, for the purpose of securing the election of a physician to the office of Coroner, in all cases. Having noticed in a late number of the *Provincial Medical Journal*, an article which places this matter in a very clear light, we gladly avail ourselves of the opportunity of fulfilling our intention, and feel that we cannot more forcibly excite the attention of our brethren, than by copying the article in question.

'Our attention has been recently directed to the subject of coroner's inquests, by some cases of an extraordinary kind which have occurred within the last few weeks in Dublin and London. Nothing can prove more clearly the deplorable state of medical jurisprudence in this country than the investigations to which we are about to allude, conducted by laymen who know nothing of medicine, and by medical men ignorant of the principles of medical jurisprudence.

If the main object of the coroner's inquest be to ascertain the true cause of death in doubtful cases, it were difficult to say whether justice and science suffered most in the hands of the legal or the medical judge.

On Monday, the 2d of May, an inquest was held by one of the city coroners, at Winder's Tavern, Amiens street, Dublin, on the body of Mary Connolly, who was reported to have been killed by her husband on the preceding Saturday.

The witnesses who were examined proved that the husband of the deceased was a man of violent temper, and frequently in the habit of beating his wife; that during a quarrel, which occurred shortly before the woman's death, he was seen to strike her with his fist, knock her head against the foot of the bed, and give her a kick which prostrated her on the floor; and that within a very short time afterwards the woman was found on the bed foaming at the mouth; some salt and water was now given, but she became insensible, and died.

Three medical men were examined by the coroner touching the cause of death, as discovered on post-mortem examination.

Thomas Wright, Esq., surgeon, stated that he went through one of the most minute and laborious dissections he ever made in his life, in order to arrive at the truth, which occupied nearly three hours: deceased had on her head three marks of violence, and a *corresponding injury on the membrane that covers the brain*; the brain itself was sound; there was a small gland in it diseased; that had no connection with the wound; the wounds on the head were sufficient of themselves to account for death, but would produce stupor, consequent inaction, and probably fainting also. The windpipe and parts about the neck were free from injury. There was a reddish mark on the right side of the neck, but it was not produced by violence. The lungs were perfectly sound. The heart was sound also, but quite empty of blood, as well as all the vessels leading to and from it, a state in which persons dying of syncope or fainting fit, it is generally found. The inference he should naturally draw from that circumstance was, that the deceased died in a faint or state of syncope, which would be accelerated, if not actually produced, by her being in that state of fainting placed in an erect position, similar to the position she was placed in when the salt and water was given to her as detailed by the witnesses. The contents of the abdomen were sound. The surface of her body was remarkably pale, and her face was exsanguineous, peculiar to persons who die in a faint. The blood of persons who died very suddenly is generally in a fluid state, but deceased's was not; has known persons die sitting in a chair from over dose of common salts.

In reply to Mr. Curran, Mr. Wright said, 'I think the deceased died in a state of syncope by being kept in the erect position after the faint, and having the salt and water administered to her; deceased did not die from immediate violence, but it might have had an indirect effect towards producing her death.'

G. W. Hatchell, M. D. and surgeon, was next examined, and corroborated the testimony given by Mr. Wright. He further stated, that the vessels of the brain were completely empty, and would corroborate what Mr. Wright had said—namely, that the deceased died in a fainting state; the exhaustion following from the quarrel with her husband would naturally produce fainting.

William M'Leod, M. D., was examined, and corroborated the testimony given by Dr. Hatchell. He stated it to be his opinion that deceased died in a state of syncope or faint. His opinion was more strongly confirmed by the circumstance of his having seen the deceased two hours after her death, when the surface of her body exhibited that ex-sanguineous appearance peculiar to persons dying from syncope.

The jury, after about ten minutes' deliberation, returned the following verdict:—

'We find that the said Mary Connolly died in syncope or faint, produced by violent excitement, arising from a quarrel with her husband on Saturday last, and from the injudicious treatment she received subsequently, while in that faint, by her neighbors placing her in an erect position, and administering salt and water.'

The next case, or rather series of cases, to which we would refer, occurred in London, and were the subject of a communication from Dr. Wilson to the Medico-Chirurgical Society. We notice some of the leading features briefly. A color manufacturer was taken ill on the 1st of January, with griping and purging, which continued until his death on the 20th of the same month. The youngest child, aged two years, died on the 16th. The survivors of the family, consisting of the mother and two children, were admitted into the Middlesex Hospital on the 26th. The symptoms were very obscure. The mother died on the 21st of March; the time at which the other children died is not stated. Post-mortem examination did not throw any clear light on the cause of death, or on the nature of the disease. The society, however, seemed to think that the fatal termination depended on the effects of poison. With this opinion we are much disposed to coincide.

The bodies of the father and youngest child were disinterred by order of the coroner, after the admission of the survivors into the Middlesex Hospital; a chemical analysis, it is said, was made, but no conclusion could be arrived at.

In truth, no other result can follow from investigations conducted after the fashion of coroner's inquests in this country. This we shall make the theme of some observations on a future occasion, our present object being merely to direct attention to certain facts illustrative of the state of medical jurisprudence in the United Kingdom.'

Numberless instances are to be found here, illustrative of the careless and utterly inefficient manner in which inquests are held, and the lamentable ignorance of medical jurisprudence which prevails. We think there is little necessity to urge on the profession, the duty, which in this matter, they owe to themselves, the community, and the cause of justice and morality. Let something be immediately done to obtain the interference of our legislative bodies, with the view of securing medical coroners. And let medical men acquire such a knowledge of the principles of medical jurisprudence, as will enable them to discharge with efficiency and propriety, the responsible duties of witnesses.

At a meeting of the French Academy of Sciences in October last, a communication from M. Sondalo, 'On the means of purifying the air which has been already taken into the lungs of the Carbonic Acid Gas with which it is charged,' excited great interest. This gentleman informs the Academy that he remained under water for an hour, clothed with a water-proof dress, and having with him in a small vessel, the preparation of lime required for the absorption of the cabonic acid, and the oxygenated water, in order to renew the oxygen of which the air already breathed had been deprived. With the aid of this small and simple apparatus, he was able, during the time above stated, to purify the air which he took down with him, in the open space reserved expressly for that purpose. The dress worn by M. Sondalo appears to us to have been similar to that worn in England by the ingenious man, whose name we do not now recollect, and who first demonstrated, by actual personal experiment, the possibility of existing in places on fire and filled with smoke, by creeping along the floor, where the air is comparatively pure. It is a water-proof covering fixed to a helmet on the head, in which are two openings fitted with strong glass over the portion near the eyes. With this dress and the apparatus invented by M. Sondalo, it certainly appears to be quite possible to render most efficient service in cases of fire, and also to explore for a time, without an external supply of air, the depths of the ocean.

A System of Human Anatomy, General and Special. By Erasmus Wilson, M. D., Lecturer on Anatomy, London. American Edition. Edited by Paul B. Goddard, A. M., M. D., Demonstrator of Anatomy in the University of Pennsylvania, &c. &c. With One Hundred and Seventy Illustrations by Gilbert. From the Second London Edition. Philadelphia: Lea & Blanchard. 1842. 8vo. pp. 576.

An elegant edition of one of the most useful and accurate systems of anatomical science which has been issued from the press. The illustrations are really beautiful, and their execution reflects the highest credit on the able American artist who copied them for this edition of the work. In its style, the work is extremely concise and intelligible. Dr. Goddard has added a number of valuable notes, and has made some judicious alterations of names. No one can possibly take up this volume without being struck with the great beauty of its mechanical execution; and the clearness of the descriptions which it contains, is equally evident. Let students by all means, examine the claims of this work on their notice, before they purchase a text book of the vitally important science which this volume so fully and easily unfolds.

Sixth Annual Report of the Trustees of the Vermont Asylum for the Insane.

This institution appears to be in a highly prosperous condition. The location is remarkably healthy, and the number of deaths has been small. In the report, Dr. Rockwell dwells forcibly on the great importance of placing the insane in a proper asylum in the early stage of the malady.

Introductory Lecture to the Course of Instruction in the Medical Institution of Geneva College. By Thomas Spencer, M. D., Dean, Professor of the Institutes and Practice of Medicine.

A very flowery discourse, plentifully sprinkled with poetic quotations, and sentiments from the best authors. Take a specimen of its eloquence:—

> Lastly, though not least, may I allude to the departments of *Anatomy* and *Surgery*—the one the very basis of our profession; the other the presiding genius, that pours the balm of healing upon the various wounds that 'flesh is heir to.' Numerous must be the ills, in the every-day practice of your profession, calling imperatively for the employment of the exact knowledge taught from both these chairs—knowledge, on which the use of limb for life or life itself may be dependent. Not only so, but yours, my young friends, may be the sacred duty, amid the darkness of night, to visit, guided only by your country's eagle, screeching o'er the blood and carnage, the battle field. Amid the din of arms, you must hold the issue of death or life to the bleeding soldier. If you forget the precepts of these departments, you may leave to bleach upon the dread aceldama, the bones of the youthful patriot—thus destined, no more to light the tender love of sister—no more to wipe from mother's eye the silent tear. If, however, lighted by the brilliant torch of our *Analytical Anatomy*, guided by the index of our exact *Surgery*, to the severed artery, it may be your ineffable joy to send back from the field of glory, many a veteran hero, again to twine the cords of social sympathy, amid father, mother, and prattling inmates of 'sweet home.'

Werry pathetic!

The Medical Student's Guide. By Heber Chase, M. D. Philadelphia: J. G. Auner, 333 Market street. 1842. 12mo. pp. 106.

A very useful compendious view of the collegiate and clinical medical schools of Philadelphia, with the courses of private lectures, and other information of importance to the student of medicine. Such a manual was much wanted, and Dr. Chase's attention in supplying one, will doubtless be justly appreciated.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Catalepsy, with Transposition of the Senses.

BY DR. DUVARD, OF CAEN.*

Mademoiselle Melanie had enjoyed good health up to the age of twenty-one, when she began to suffer from dry cough, with pain in the chest and headache; in January, 1841, she was attacked by pleurisy of the right side, and since then has continued to suffer from pain in that region; the catamenia now decreased in quantity, and was finally arrested.

In the month of July, 1841, I was first called on to visit the patient; she then exhibited all the signs of pleuritic effusion. After a variety of treatment, continued for several weeks, a seton was inserted in the patient's side, and she was compelled to have an enema—a remedy which she had previously refused to submit to. A few hours after the administration of the enema, she was seized with a most violent attack of hysteria, which continued for several hours. The attacks of hysteria recurred, with the same violence, for several successive days, and seemed to be excited by the ingestion of food, which the patient continued to eat with avidity, in spite of remonstrances.

Six days after the first attack of hysteria, the patient became suddenly dumb, and continued so for three days, being unable to articulate a single word; on the fourth day she recovered the power of speech, at the termination of a severe hysterical attack; the surprise, however, expressed by those about her at hearing her speak, threw her into a fresh fit, which lasted for three hours, and ended in catalepsy: this was on the 30th of August, 1841. From this period the patient was seized every day with several attacks of catalepsy, alternating with hysteria, and lasting about half an hour.

---

* We have abridged this curious case from the last number of the 'Gazette Medicale de Paris,' for the edification of mesmerisers and miracle-mongers.—*Eds. Prov. Med. Journal.*

During the cataleptic accesses there was complete insensibility of every part of the body; the limbs remained in the most fatiguing positions without stirring; the respiratory movements were imperceptible, and the pulsations of the heart, which could scarcely be felt, were from 60 to 70 in the minute. After a few days the cataleptic fits became longer, and lasted for several hours, being, however, occasionally interrupted for a minute or two, whenever the girl coughed. Sometimes she would turn round in her bed or sit up; at others, she would suddenly start up, without opening the eyes, and place herself on the edge of the bed, or on some piece of furniture, in a most fatiguing posture; in this state would she remain until a fit of coughing came on, or until she was brought back to her bed. Although the eyes were constantly shut, she avoided every obstacle carefully, and seemed heedless of risks which would have alarmed any one in a normal state. On one occasion, she left her bed during a fit of coughing, ran to a window and opened it; before any one could come to her assistance, she had one foot out of the window, but the cough suddenly ceased, she became cataleptic, and remained in the same position until some people came and placed her in bed.

When the fits of hysteria and catalepsy ceased, the patient recovered all her faculties, and merely complained of fatigue, and her ordinary pain in the side.

Five weeks after the first attack of catalepsy, Mdlle. Melanie fell several times into a state of natural somnambulism. She would get up without opening her eyes, walk about her room, arrange the furniture, and enter into conversation with those about her, often mentioning circumstances which she would have wished to conceal; after remaining in this state for several hours, she fell into a state of catalepsy, indicated by apparent suspension of the respiration and complete silence.

On the 12th of October, a few days after her first access of somnambulism, I found the patient in a state of catalepsy. Having placed my hand on the epigastric region, I noticed that her countenance became expressive of pain. I then placed my lips on the pit of her stomach, and asked her several questions; to my astonishment she answered correctly, for although I had read most of the histories of this kind, recorded in different works, I did not believe one of them. During this first examination I made numerous experiments, which led me to conclude that there was a transposition of the five senses to the pit of the stomach. On the evening of this day I made fresh experiments, during three hours, in the presence of numerous witnesses, who were not less surprised than myself. In a word, during two months, I renewed the experiments daily, and often several times a day, making use of every precaution to avoid deception, and having numerous witnesses around me. I shall now relate the results of these experiments.

During the cataleptic state the muscles presented three different conditions:—Sometimes they were all relaxed, and the limbs could be placed in any position, which they retained, however fatiguing the posture might be; at other times all the muscles were in a state of rigid contraction; at others, again, they were relaxed, and the limbs fell down when raised from the body.

There was no sensibility in any part of the body, except over the pit of the stomach, the palms of the hands, and soles of the feet. Thus we might pinch the skin or pierce it with pins, pull out the hair, tickle the nose, &c., without eliciting any sign of feeling. On the contrary, if the pit of the stomach, soles of the feet, or palms of the hands were touched, even with the point of a feather, the girl immediately withdrew the part touched, and her countenance indicated displeasure. When a Leyden jar was placed in communication with the parts just named, she had a violent commotion, or was suddenly awakened, but the jar might be discharged on any other part of the body without producing the slightest effect.

The ears appeared to be insensible to sound—the loudest noise did not attract her attention; but when a small bell was agitated over the sensitive parts, her countenance showed she heard the noise. If the lips were placed in contact with the sensitive parts, she heard every thing that was said, although the voice was so low that it could not possibly reach her ears. Her answere were delivered in an exceedingly low tone, and, generally speaking, the person appointed to catch them would repeat them, without having heard the questions asked. It was not necessary to place the lips in contact with the sensitive parts; I often employed a long stick, an iron rod, &c., as a conductor between the mouth of the speaker and the patient's foot, and she heard perfectly well, although the persons placed between her head and the speaker could not distinguish a syllable of the question asked.

The patient never spoke, except when her limbs were in a state of relaxation; during the rigid cataleptic state the tongue and organs of speech were immovable.

The senses of taste and smell were not exercised by their natural organs, but were very acute in the sensitive parts. Thus, we filled the nose with assafœtida, or tobacco; placed bottles of ether, concentrated ammonia, &c., under the nose, without producing the least effect; but when a small portion of a sapid body was placed in contact with the sensitive parts, the patient distinguished it at once. Thus she recognized and named, one after another, the syrups of poppies, vinegar, gum, and capillaire, wine, water, orange-flower water, Seidlitz water, currant jelly, &c., although only one or two drops of each substance was placed on the palm of her hand.

When a few grains of snuff were placed on the sole of her foot, she sneezed at once, and thus easily distinguished common French snuff from English snuff.

Although the results of my first experiments induced me to think that the sense of vision was transposed as well as other senses, subsequent trials showed that what I had regarded as vision was nothing more than the result of an exquisite sense of touch. When an object was placed on any of the sensitive points, and she was asked if she saw it, she answered 'Yes,' and immediately named the object if she were acquainted with it, or if not, gave a correct description of the body. Thus she always detected a watch, when placed over the pit of the stomach, and never failed to tell whether it was made of gold or silver, was going or stopping. If asked the hour, she would answer pretty correctly as to the *true* time of day; but if the hands of the watch were designedly changed, she always failed to tell what time they marked. She could distinguish and name every kind of French coin placed in her hand, but not the name of the sovereign under whose reign they were struck; she could distinguish a bit of silk from a bit of cloth, but not their respective colors.

At the second sitting, she succeeded in spelling the word *commerce*, written in large letters, and placed on the pit of the stomach; this required considerable efforts, and she complained for a long time that the attempt produced great fatigue; in subsequent experiments, however, she was never able to distinguish any of the letters of the alphabet, when placed in contact with the sensitive parts. Whenever I asked her to point out the seat of her disease, and indicate to us the appropriate remedies, she refused—answering that such was my business, and not hers.

[The remainder of Dr. Duvard's case is occupied with a history of the treatment, which it is unnecessary to describe. He attempted to magnetise the patient; during the first three sittings she fell asleep, and remained so for several hours, but afterwards all attempts of the kind failed to produce any effect. The use of electricity seemed to be attended with more beneficial results than any other remedy; after the first day the fits of catalepsy and hysteria became less frequent and violent, and the patient returned, much improved, to her friends in the country.]

Tincture of Sesquichloride of Iron in Gleet.

[Mr. Jones communicates the following to the *London Lancet*:]

In former years I have had considerable difficulty in the thorough cure of 'gleet,' being able to put an end to the discharge for a time, as generally the case, to return.

I will now relate 'two cases' out of many where I have succeeded in permanently eradicating this troublesome complaint by the tincture of sesquichloride of iron.

John Thomson, æt. 24, had gonorrhœa eighteen months ago, and gleet continued since; has been under treatment of a surgeon, who ordered cubebs, copaiva, &c., but as he was careless of consequences did not apply regularly: he had a discharge of thin, white pus when he applied to me Ordered nitrate of silver and sulphate of zinc injections, alternately to be used, but without effect. I then made use of tincture of iron, gts. xxv., three times a day, and gradually increased to gts. xl.; in a fortnight he was perfectly well; has had no return since.

Wm. Simpson, æt. 21, had gleet twelve months; ordered the tincture of iron, dose, gts. xx., two or three times a day; to be increased to dose gts. xxxv. After seven or eight days the discharge had nearly ceased; in fifteen days he was cured.

Treatment of Prolapsus Recti by the Actual Cautery.

A lady, 50 years of age, suffered from enormous dilatation of the anus, with a permanent, hard, and very painful prolapsus, insomuch that she could not remain in any other than the recumbent position. M. Begin, who was called in, determined to apply iron at a white heat, as the only means of destroying the projecting portion, and contracting the enlarged opening. The patient was placed on her right side, the nates projecting beyond the edge of the bed, the left thigh flexed, the right extended, and was supported in that position by assistants, by whom the right nates was raised. As much of the prolapsus as possible was returned, leaving only the indurated and fleshy portion externally. Three applications of the actual cautery were made, the shape of the first and second instruments used not admitting of the parts being fully cauterised; a dry, brownish eschar formed, and the patient suffered less than she expected. Cold water applications were at first had recourse to. On the fifth day suppuration commenced, and the sloughs began to separate. At a month's end there were not any traces either of the disease or the operation—the anus would scarcely permit the entrance of the finger. The same operation was successful in another case of a similar character.—*Arc. Gen. de Med.*

Indigestion.

Indigestible matters, to which the pylorus refuses a passage, may remain in the stomach, and disturb its functions for days, or even sometimes for weeks together. Sooner or later vomiting is set up, and the offending substance expelled. I lately saw a mass of hard curd—a small cream cheese in respect to consistence—which was thrown up after several days of severe gastric pain and disorder. The relief was immediate and complete. The patient had been taking large quantities of cream with his tea and coffee. In another person a similar fit of indigestion terminated in the ejection of a mass of snuff. This is no unusual source of derangement of the stomach among those who use lavishly that nasty luxury.—*Dr. Watson's Lectures.*

THE COLLATERAL SCIENCES.

[FOR THE NEW YORK LANCET.]

THE CRYSTALLINE LENS.

BY MRS. GRIFFITH.

[*From an unpublished work on the Eye.*]

No. II.

It is stated by several observers, that in the fœtus and new-born infant, the lens has no lamellar organization, and Mr. Middlemore informs us that this is the case in the newly formed lens of a rabbit. Taking these facts for granted, it must be inferred that the convex surface of a lens, in the course of time, is operated upon by light to a certain depth of the surface. We know that light and heat will harden many surfaces, leaving the central part quite soft; a familiar instance of this is in muffins and cream cakes, which are hard without and soft within. The layers of the lens, therefore, may not be an essential, but an incidental property.

It was Demairon who first observed that the particles of a fluid, when the act of freezing took place, are thrown into new positions. If we examine a flat stone early in a frosty morning, it will be perceived that the dew of the preceding evening is transformed into shapes very different from its usual appearance. The particles have arranged themselves at right, acute, and obtuse angles, without observing any parallelism of axis, so that what in dew was transparency and roundness, is opacity and angularity in the crystals.

But this is not all, for when the particles are thus disunited, forming a variety of fantastic shapes, the entire mass arranges itself in such a manner as to form stems and branches, giving the whole an aborescent appearance. One morning, in the spring of 1839, just after sun rise, all the stone flagging on the east side of Broadway, was covered with this beautiful tracery, the evening previous the stones having been wet with heavy dew. This curious effect is supposed to arise from the agency of the electric fluid; which, in this case, produces an appearance of organization, although in reality it is only the shooting out of aqueous crystals.

We perceive, therefore, that uniformity of structure does not always imply that it is the original property or shape of the substance, but that it may be the result of a change produced by some chemical law. The regularity of structure, representing fibres and teeth to the vision of Sir David Brewster, and cracks, with strings of air bubbles between them to mine, proceeds entirely from the evaporation of the fluid particles which the lens contains.

That they appear as fibres and teeth both in fragments and on the globular surface, is entirely owing to the obliquity of the magnifier, for when *that* and the object are parallel with the axis of our own eye, neither teeth nor fibres are perceptible. We then see, what is there in reality, globules of a certain size arranged in rows, and globules still smaller following the course of the first row and in close contact with it. These smaller globules are again joined by another row of the size of the former ones, and so they proceed alternately large and small. This alternation of large and small globule is to be sought in the theory of vacuums, which does not allow of an unoccupied space.

To suppose that the crystalline lens has an organization, such as is conjectured by Leuwenhöeck, Brewster, and Young, a great deal must be taken for granted, a great deal which neither has, nor can be made perceptible to our senses. No one has ever succeeded in giving ocular demonstration that there is an organization, for that which they point out as such, is owing to a *derangement* of parts. An organized lens, in the sense that these philosophers conceive it, must be an independent body having a central action like a ganglion, with distinctly formed nerves and blood-vessels, either issuing in ramifications from this centre, or passing through and over it from the different vessels and nerves of the eye. Does the most powerful magnifier ever disclose an organization at all approaching this, I mean if a strict parallelism is observed?

In dissecting an eye with great care, we perceive that the terminal branches of the central artery ramify over the posterior surface of the lenticular capsule. Whether these vessels proceed from the branch which passes through the vitreous humor, or from those which ramify through the membrane called the retina, is of no consequence to the question; perhaps the whole are reflected over the capsule and the ciliary ring.

We can arrive at the above certainty very satisfactorily, for the vessels, though so very minute and transparent, have certain indicia by which their presence is detected. At any rate, they can be traced on the posterior surface of the capsule, and I am not very sure that they do not pass around and ramify over the anterior surface likewise. But we may safely infer that *unless there is inflammation of a peculiar character*, which shall destroy the *texture* of the capsule, which has sometimes been observed, the blood-vessels of the eye can never penetrate it and attach themselves to the crystalline lens. There is no trace on its surface nor through the layers either of nerves or blood-vessels, and it may be confidently asserted that the lens is a homogenous body of lamellar construction, originating from a nucleus, and that this nucleus, as well as the whole lens, is produced by a deposition of the secretion called the liquor Morgagni—this is the true history and character of the crystalline lens.

But I have not done with it yet, for there are many other points to discuss, of equal importance with those already examined. For instance, it has been urged against me that I am only reasoning from the *dead* eye, and that I cannot deny, positively, that the lens in the living eye may not be the seat of such action and organization as has been ascribed to it. There is but one answer to this, which is, that all discussion and all experiment of this kind proceed from an examination of the *dead* eye, and therefore, I claim the same right as others from experiment and observation. I claim likewise the indulgence of a priori argument, when the facts warrant it.

Now as to the contractile power of the crystalline lens, let us investigate it a little further. Many philosophers imagine that the seeing an object at a distance, or near the eye, is accomplished by a change in the convexity of the crystalline. Dr. Young considers this as indispensible; he starts with this postulatory assumption, and then proceeds to describe a structure suited to it, as we can perceive in the extract already made. But there is one fact which he, and others who adopt his opinions, have overlooked, which is, that the *dead* lens, as well as the glass one, represents objects at all grades of distance just as accurately as the lens in the living eye, and yet the convexity is not altered. As to the theory of the elongation of axis by the united action of the external muscles, which I have adopted, I have long since abandoned it. How could I avoid falling into the error at first, when men of such high reputation gave it their sanction?

What more is required of the lens in the living eye than to receive the rays from an object which is far off, and from one which is nearer? The rays from a distant object are attenuated, and of course give a smaller and a fainter impression, and those from a near object, for a contrary reason, give a stronger and a larger impression. There is no necessity for any apparatus to regulate, or accommodate the eye to different distances. It is necessary to regulate the *quantity of light*, and for this purpose we have the eyelids and the beautiful contrivance of the pupil, which contracts and dilates according to the luminous stimulus which it receives.

The theory of the muscularity of the lens so as to adapt itself to different distances, is wholly gratuitous. No one who has ever handled a fresh lens,—which is glutinous and soft, like jelly,—could suppose that the capsule could contract equally and press all around the periphery of the lens, and not injure its texture. With the case of molusca it is very different, and not to be discussed here. The more minutely we examine the lens, the more strongly shall we be convinced that it is an insulated, inert body, and excepting that it is of a soft consisteuce, is precisely like a common glass lens, and when it is extracted from the eye, the common glass lens can supply its place. The lens taken from the eye of an animal recently killed, reflects and refracts after the manner of a glass one, and we can see the surfaces as we look through it, or on it, just as if it were a glass one. So in like manner, if we put the lens of the animal and the glass lens in water, we cannot see the surfaces of either. The glass lens in an artificial eye, such as is used for optical experiments, is as perfectly diaphonous, and shows no more of its surface, than the lens in the living eye surrounded by transparent humors.

It is not, therefore, wholly owing to the different densities of air and water, as Sir Charles Bell supposes, that we are prevented from seeing the surfaces of the glass lens. That we do not see these surfaces, both of the glass and the living lens, arises from the obscurity of the chamber behind them. The rays, therefore, which pass through the lens are not reflected thence, but are absorbed by the black pigment, so that there is no representation of the posterior surface, nor, in fact, of the anterior, unless there is opacity. The objects that we see painted on the eye, are on the reflecting surface of the cornea, and if we observe, they are all erect. When the glass lens is under water, it loses its identity; for if there be no object behind it, the difference of density is not perceptible, and the rays pass and repass as if no lens intervened.

The lens of the eye, therefore, is nothing more, as I have all along observed, than a common glass lens—it is intended for nothing more. That it is composed of layers, is owing to the different stages of progression. In infants, it is said to be of the same density throughout, and that in the course of time the outer surface is absorbed, and layer after layer is added until it is at its maximum. After this it shrinks—not by the loss of lamellar structure, but by that contractile power which acts upon the whole system as we advance in age. When we reflect upon the uses of a lens,—the glass one in the form of spectacles, so completely answering the purpose of a perfect crystalline in those eyes which have the cornea too convex,—we must be convinced that convexity and transparency are the only requisites.

Then as to its vitality—for this also is a disputed point; some philosophers contending that it has, and others that it has not life. I think that this power in the liquor Morgagni, of reproduction, should settle the question even if there was no other proof. It has no attachments, no ligaments, by which it could be said to form a part of the general system. It is enclosed in a case of a very curious, compact texture, and from this case it drops out as free as a marble from a bag. A wen, a polypus, is far more worthy of being considered as a living body, because active vessels come in immediate and close contact with it. Even the blood, about the vivification of which there has been so much dispute, is not so completely a separate insulated body as the lens, for while the latter floats loose in the fluid—being hermetically sealed within its capsule and never touching it—the former is in contact with every tube through which it runs.

The lens is an inert mass, and has within itself no power of resistance. It is entirely passive, and sustained in its pristine shape and transparency by the singular capsule which surrounds it, and it is kept in repair and lubricated by the secretion called the liquor Morgagni, for none other can have access to it.

Every other organ, membrane, and tissue, is connected with some part or the other of the general system, either by ligatures, nerves, ganglia, or vessels, and life pervades it. But the lens is a mere deposition—just like the calculi found in different parts of the body, with this difference, however, that the lens arises from the *perfection* of organization and calculi—from some morbid state of the secretive ducts in a particular part of this organization.

As the lens does not possess vitality, so neither, in the true sense of the word, can it be said to die. It is subject to opacity, which destroys vision, but a glass lens is subject to the like opacity from friction.

Being entirely dependent on the fluid within its capsule for its lubrication and nourishment, we cannot wonder that if this fluid becomes vitiated or diminished in quantity, opacity should take place. As it is by imbibition that the fluid enters the capsule, want of integrity in the secretory ducts will produce great derangement, and the liquor Morgagni will become viscid, acrid and turbid. Of course, when this occurs, the lens must suffer; perhaps it is a deficiency of this fluid which causes opacity of the lens. The capsule is a firm substance, and a soft mucilaginous body like the crystalline lens would be easily injured if it came in contact with it. In fact there are various modes by which the lens might be injured, and the only wonder is that it so seldom becomes opaque.

Sometimes the lens is absorbed spontaneously, not in consequence of lesions on its own surface, but owing to some preternatural solvent power in the surrounding secretions. This absorption, however, only takes place when the lens is in its natural and usually soft state, for in confirmed, hard cataract, it remains entire and cannot be dissolved. It then acts like a foreign body in the eye, and sooner or later produces mischief. Oculists are aware of this solvent principle in the secretions, for they frequently cut up a soft, cataractus lens, and rely on its disappearance. All this proves the homogenous nature of the crystalline, and that it has no power of resistance within its own body. It has been frequently analysed, and is said to consist principally of water, gelatine, and albumen, but that no method yet taken has detected fibrine. Of late it is asserted that 'the *principle* of the crystalline lens is protein, as it possesses the same composition and atomic weight as the pure protein of albumen, fibrin, and caseum.'

Herschel says the eye is an assemblage of lenses which concentrate the rays emanating from each point of external objects on a delicate tissue of nerves, called the retina, there forming an image or exact representation of every object, which is the thing immediately perceived or *felt* by the retina.

According to M. Chossat, both surfaces of the lens are ellipsoids of revolution about their *lesser* axes. But it would seem from his measures that the axes of the two surfaces are neither exactly coincident in direction with each other, nor with that of the cornea. This deviation would be fatal to distinct vision were the crystalline lens very much denser than the others, or were the whole refraction performed by it, which however is not the case.

Dr. Young's experiments on persons deprived of the lens go far to prove the total want of a power to change the focus of the eye in such cases, (changing the figure of the eye by the contraction of the recti,) though a certain degree of adaptation is obtained by the contraction of the iris, which limiting the diameter of the pencil, diminishes the space on the retina over which imperfectly converged rays are diffused, and thus, in some measure, obviates the effect of their insufficient convergence. When we consider that the crystalline lens has actually a regular fibrous structure, (as may be seen familiarly on tearing to pieces the lens of a boiled fish's eye,) being composed of layers laid over each other like the coats of an onion, and each layer consisting of an assemblage of fibres proceeding from two poles like the meridian of a globe, the axis being that of the eye itself; we have, so far at least, satisfactory evidence of a muscular structure; and were it not so, the analogy of pellucid animals, in which no muscular fibres can be discerned, and which yet possess the power of motion and obedience to the nervous stimulus, though nerves no more than muscles can be seen in them, would render the idea of a muscular power resident in the crystalline easily admissible, though nerves have not yet been traced into it.

Now here we perceive is a great philosopher, who, intent upon a great object—such as 'numbering the stars'—can scarcely descend to a minute investigation of the dried lens of a fish's eye. Those radiations of fibres, which he compares to two poles, like the meridian of a globe, are the result of the *drying* process. The shrinking of each layer of the lens could not have been effected in any other way. By a careful examination of a great number of lenses, it can easily be seen that the *cracks* or *radiations*, as philosophers are fond of calling them, preserve no order, but are more or less in number, as the layer is more or less thin, and the chemical, or other medium in which the lens is immersed, is more or less astringent.

On examining the lens carefully, we perceive that there are thick and thin layers. Some lenses have five, six, and seven layers, leaving the nucleus out of the question. But every lens is composed of innumerably thin layers, independently of the thicker ones, just as if we were to put a thin layer of gum over a small object every day for a number of years.

If the lens was not formed in the way above mentioned, that is, each thick layer composed of innumerable thin ones, it would often become diseased, for the *repair of waste* would not be so easily effected. Now, as it is beautifully arranged, the secretions can insinuate themselves with greater facility between the layers, and carry off such molecules as have spent their energies, and a deposition of fresh particles can take place. Absorption and deposition are taking place for ever in the living as well as the inert system, for it is now received as an incontrovertible truth that a change of particles is taking place every instant of time—the conversion of wood to stone is a glaring, though a happy illustration of this change.

This being the case, it can easily be inferred that when the fresh lens, in its soft state, is immersed in a hot fluid, that there will be unequal contraction of parts, and that these innumerable thinner layers will not show a straight line in any direction, but have a shrivelled appearance throughout their curvature.

ITEMS AND INTELLIGENCE.

Premiums to Medical Students.

In a lecture by Dr. Houston, one of the surgeons of the City of Dublin Hospital, which was recently published in the 'Medical Press,' we find the following remarks on the custom of giving prizes to medical students:—

You may be disposed to consider our system of instruction still imperfect, inasmuch as premiums are not offered by us as incentives to zeal and industry in study. I deem it right, therefore, to make a few observations on this point, and to state our reasons for holding back from conformity to this usage.

We tried the experiment for two sessions, in the full anticipation that good would result from it,—that the pupils would be encouraged to emulation in study, and that the best man would get the first premium. We gave six valuable premiums in two sessions; and who think you were the individuals who each time received them? They were the most junior students in the hospital—gentlemen, I admit, of superior talent and industry, and who justly merited praise so far, but who were not, in virtue thereof, entitled to be set forth to the public, by a specious document in the form of a premium, as the most learned and experienced students of the class attending the hospital during the session, in which such premiums were adjudicated. They got them, because the senior students—gentlemen of greater practical experience, and whose characters were much at stake, declined, for the paltry value of the prize, putting themselves in competition with juniors, whose knowledge must of necessity be partial and scanty; to whom it would not, under the circumstances, involve any loss of reputation to be beaten; for whom a prize would be great gain and in whose favor, after all, chance might readily turn the scale: and so far actually did this feeling operate, even exclusively of the case of seniors as competitors, that even from amongst the juniors, in both our experiments, there were only, out of a class of between eighty and ninety students, candidates equal in number to the number of premiums offered by us; so that, in the end, all that the examiners had to determine was, which should have the first, which the second, and which the third prize; and yet each of these *unrivalled* gentlemen, received his premium and exhibited it as a trophy of a great victory—not satisfied indeed, even as the matter stood thus, for two of the parties considered themselves ill used, in not having obtained the first place. But the evil did not end here—it did not terminate in the uncalled for elevation of character, or the temporary exultation of one student over another. In after life, when men came to be competitors for public offices, this accidentally acquired bauble of the day has been used with undue effect in the race of competition; and that, not only against the actual competitors for the premium, but against all who attended the hospital for that, or even other sessions.

Premiums have a different effect in their operation upon students in medicine from that upon almost any other classes in society. The boy at school *must* subject himself to the ordeal of competition with his school-fellows; he cannot escape, and a fair and just estimate of the respective merits of all can thereby be formed; the operation of the system upon them is good, because it is compulsory. In the university the reputation of a premium is so great, that it becomes worth the while of any one to succeed: the ambition of all is kindled to secure it; and it is only the incompetent, or those whose attentions are otherwise directed, that desist from the competition. Moreover, although, to such, success may be great gain, defeat never becomes, in any wise, a source of after disparagement: promotion in the church, at the bar, or elsewhere, is not swayed by such a fortuitous incident. Here, likewise, the premium system is good, because, while it encourages and rewards learning, it offers no disparagement to the unsuccessful candidate. But in medicine, matters are very different: here there is no compulsory competition, and the senior will not compete with the junior; neither would the junior, if the more experienced student allowed himself to become a candidate, enter with him into the concours,—the contest in either case being unequal, and the prize altogether disproportioned to the risk of a failure.

But to take another ground, what is the predicament of a medical student as compared with the school-boy or the lad entering college, that he should require to be coaxed along with bribes to the attainment of good professional skill? The school-boy is whipped or rewarded, according to his taste, as the only means of preparing him advantageously for the exercise of the privileges of manhood: to a student entering the university, places of great honor and wealth—ample provisions for independence—are held up to his view, and the premiums given by alma mater during the collegiate course are only so many tests of the progress towards perfection of the aspirants to such honors; but how is it as regards the medical student? He should not require the whipping or the sugar-cakes of the school-boy, nor is any prospect open to him of promotion in the college to which he may attach himself by the possession of such adventitious credentials. He is, to all intents and purposes, a man; he has linked himself to a profession which carries in it its own peculiar rewards; he has taken his stand for life, with his eyes open; and if feelings of ambition and a desire for success do not stimulate him to the necessary exertion, such paltry rewards as are only adapted for school-boys will never lead him on to the goal.

Such are the grounds upon which we have abandoned the premium system. We have found it, not only ineffective as a comparative test of information in the student, but unfair to those who did not choose to become competitors; and in addition, we are of opinion that right-minded medical aspirants require no such incentives to the fulfilment of a duty with which their own interests are so closely interwoven.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Nov 19, 1842.

35 Men, 30 Women, 33 Boys, 31 Girls. Total, 129.

DISEASES.

Apoplexy	2	Intemperance	0
Asthma	0	Inflammation	0
Asphyxia	1	Of liver	2
Aptha	0	Of bladder	0
Abortion	0	Of brain	1
Bleeding	1	Of stomach	1
Bleeding from stomach	0	Of throat	4
Bleeding from lungs	1	Of lungs	8
Burned or scalded	1	Of bowels	2
Cachexia	0	Of chest	2
Cholera infantum	1	Of bladder	0
Colic	1	Insanity	0
Congestion	1	Jaundice	0
Consumption	27	Killed or murdered	0
Convulsions	13	Lues Venera	0
Croup or hives	0	Mortification	0
Cancer	1	Malformation	0
Debility	1	Marasmus	6
Delirium tremens	2	Measles	1
Diarrhœa	4	Old age	4
Death from poison	0	Organic disease of heart	2
Dropsy	2	Palsy	1
Dropsy in head	7	Retention of urine	0
Dropsy in the chest	1	Rheumatism	0
Drowned	1	Spinal disease	0
Dysentery	2	Suicide	1
Erysipelas	0	Sprue	0
Eruption	0	Small-pox	2
Fever	2	Tumor	0
Scarlet	2	Teething	0
Typhoid	3	Ulceration of intestines	1
Puerperal	0	Unknown	0
Remittent	4	Ulceration of bladder	1
Billious	1	Ulcers	0
Inflammatory	0	Varioloid	1
Intermittent	0	Whooping cough	1
Hip Disease	0	Worms	0

AGES.

Of 1 year and under, 37; between 1 and 2, 15; 2 and 5, 9; 5 and 10, 2; 10 and 20, 3; 20 and 30, 12; 30 and 40, 22; 40 and 50, 10; 50 and 60, 8; 60 and 70, 3; 70 and 80, 6; 80 and 90, 2; 90 and 100, 2; 100 and upwards, 0; unknown, 0.

JOHN H. GRISCOM, City Inspector.

City Inspector's Office, Nov. 21, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, DECEMBER 3, 1842. No. 23.

LECTURES.

CLINICAL LECTURE

ON

THE TREATMENT OF GONORRHŒA.

BY

PROFESSOR VELPEAU.

Delivered at the Hospital of la Charité.

Gentlemen:—In the history of medicine there is, perhaps, no disease for which so many infallible remedies have been discovered as gonorrhœa. The reason of this is evident. You all know that, in a great number of cases, gonorrhœa will disappear, after a month or two, without any treatment whatever; and hence, unless a remedy be injurious, it will not interrupt the natural tendency to a cure.

The means employed in the treatment of gonorrhœa are either general or local; in the present lecture, however, I shall confine myself to the consideration of the former. These may be distinguished into two classes—one consisting of mild remedies, the other more or less active and prompt in their effects; and it is the latter class which supports the charlatan.

Amongst the active remedies, the most remarkable are copaiva and cubebs; we have also gunpowder, which soldiers frequently employ, and with which I made several experiments in the year 1836. Tincture of iodine was warmly praised by an Italian surgeon, M. Broglia; but I made five or six trials of this remedy at la Pitié, and am convinced that it is of no value. The same remark applies to the balsam of styrax, which I also tried without effect; and here I may mention an incident worth noticing. One of the patients took a dose of the styrax ointment instead of the balsam, and suffered no inconvenience whatever from it. Tannin likewise has been said to arrest gonorrhœa in three or four days; but on administering it to patients at la Pitié I did not obtain any favorable results. I shall not detain you by going through the immense lists of remedies which have been recommended for the disease now under consideration; the greater part of them are only worthy of quacks and old women, and have no effect whatever on the discharge. Let us, therefore, turn to those on which the surgeon can place some reliance.

You all know that soldiers affirm gunpowder, dissolved in brandy, to be the most efficacious remedy for gonorrhœa; they will tell you that they have seen hundreds of cases cured in this way. I was determined to test the value of this remedy, and to discover on which of the ingredients of powder (granting it to be efficacious) its action depended; with this object I administered the ingredients separately.

The nitrate of potass was first tried in the dose of half an ounce daily; it was even carried to two ounces during the day, but with no other effect than that of deranging the digestive organs. Experiments made with sulphur and charcoal, separately, gave the same result. I then tried the gunpowder; it produced violent colic and nausea, and when it was given in brandy no patient could be induced to take it longer than three days; the discharge was never arrested by it.

We now come to copaiva and cubebs. And first I would remark, that any of you who have followed my practice in this hospital must be convinced of the error of those who assert that cubebs is more liable to irritate than copaiva. Eighteen out of twenty patients will bear the remedy well. One patient laboring under an old gonorrhœa had completely lost his appetite, and was much enfeebled; after he had taken the cubebs for some time his health was visibly improved. On the other hand, several patients were compelled to renounce the use of copaiva, when administered by itself.

Cubebs, then, is a medicine more easily supported, but it is less efficacious. The following is the mode in which I am accustomed to administer it: I commence by giving a drachm thrice a day, at morning, noon, and night. If the stomach bear it well, I gradually increase the dose to six drachms daily. It must be given in powder, and you should take care to procure it fresh, for I am convinced that cubebs loses much of its efficacy by being kept for any length of time. Many of you have seen the discharge arrested on the second or third day by cubebs; in some cases even within twenty-four hours. It is, therefore, impossible to doubt its efficacy. But you should not continue it beyond the fourth day; if it produce no effect by that time, it may be laid aside as useless.

Copaiva is the next remedy which we have to notice. It is, as you all know, excessively disagreeable, and gives rise to nausea, vomiting, &c.; hence many attempts have been made to mask its taste. Chopart mixed it with alcohol and other substances; but many patients cannot bear even Chopart's mixture. It has been mixed with sugar, but the nauseous taste still predominates; besides, the efficacy of the remedy is diminished in proportion to the saccharine qualities of the substances mixed with it.

Being desirous of avoiding the effects of copaiva on the stomach, I made several trials of this remedy in the form of enema. From one to four drachms of copaiva were mixed with four ounces of gum emulsion, containing some camphor and opium. I began with a drachm of the copaiva, and increased the dose by a drachm every day; the enema was thrown up thrice daily. There was a great obstacle, however, to this mode of treatment. Most of the patients were unable to keep the enema; but those who did were cured in three or four days. From these facts, and others observed by different surgeons since, I am inclined to think that this mode of giving the balsam, when the patient can retain it, is as efficacious as any other.

The best method, gentlemen, is to unite the two substances together. The following is the formula for the mixture which I have been in the habit of employing for several years:—Two drachms of copaiva, four to six drachms of cubebs, and two grains of opium, are made up into a paste with magnesia; this is divided into six parts, and taken in two days. Three doses are generally sufficient to effect the cure. In some cases the discharge is arrested after the second day; but you must not suspend the remedy as soon as this occurs, for the discharge would return in greater abundance. You must continue your treatment for some time. After the first dose, allow the patient to rest for a day; on the fourth day you give another dose, and on the seventh a third. Some writers pretend that the use of copaiva and cubebs is apt to induce metastasis of the inflammation to the joints, &c. I do not think that this is the case; a mere coincidence has been confounded with an effect. It is true that arthritis frequently occurs in persons laboring under gonorrhœa, and the discharge may be a predisposing course of this affection; but we are not to conclude from this that gonorrhœal arthritis arises from the use of cubebs and copaiva. The occurrence of a rash, somewhat similar to measles, is more evidently connected with the administration of these remedies; but the effect is of so little consequence that it scarcely deserves notice.

It is impossible to deny that the remedies just mentioned exercise a certain influence on the urinary organs. The urine is strongly impregnated with their odor; some writers pretend that they act as revulsives; but I cannot admit this, for their anti-gonorrhœal effect is greater in proportion to their want of action on the digestive tube. In a word, the best constitutional treatment of gonorrhœa consists in the administration of copaiva and cubebs united together.

While speaking of the general treatment of gonorrhœa, I have not touched on the use of blood-letting; on this point, therefore, I shall now lay before you a few practical observations. Some surgeons pretend that they have cured great numbers of cases of gonorrhœa by abstracting blood in proportion to the constitution of the patient, and the intensity of the inflammation, assisting the effect of the blood-letting by emollient drinks, poultices, baths, &c., and abstinence from food. I do not think that much reliance can be placed in these measures. In some cases we are compelled to have recourse to them, by the inflammation of the urethra; but they are then auxiliary and not curative measures. Thus, whenever the patient complains of excessive pain and sensation of burning in the urethra—of the symptoms, in a word, which denote inflammation—you must employ antiphlogistic remedies at once; but although you may cut short the inflammation, the gonorrhœal discharge will persist, or, if it be suspended for a short time, will return again. Daily experience proves this to be the case. You cannot, then, depend on the antiphlogistic plan alone, but combine it with remedies directed against the complaint, and then, in certain cases, you will obtain the best effects from it.

Let us now consider the external or local treatment of gonorrhœa. Here, likewise, we find a great variety of remedies, each of which has its supporters. Topical applications are placed in contact, either directly with the urethra or with the integuments immediately connected with that canal. Let us take a rapid view of the latter. Some writers pretend that gonorrhœa has been cured in six or eight days by mercurial frictions along the urethra; I have tried this mode of treatment on several patients, but do not think much of it; as an auxiliary it may be useful, when the urethra is hard or knotty, and when we have reason to suspect the existence of ulceration in the interior of the canal. Very small blisters have been applied along the course of the urethra. M. Poirson is accustomed to apply them, of the size of a two franc piece, from the anus to the root of the scrotum, or along the perineum, and says that he has found them very useful in cases of old clap. I tried this plan on six patients; two were rapidly cured, but in the remaining four the disease was only modified; the discharge would cease, and then break out again, and other means were required to obtain a permanent cure.

As to frictions with the preparations of iodine and other active substances of the same kind, I regard them merely as auxiliary means, and to be had recourse to under particular circumstances.

It is now time to consider those substances which act immediately on the mucous lining of the urethra. Almost every substance comprised under the class of emollients or astringents has been tried in the form of injection. It is difficult to imagine how emollients alone can arrest a gonorrhœal discharge, especially if it be of long standing; a curious mode of injections has been lately invented; the patient is placed for several hours in a tepid bath, and constantly throws some emollient fluid into the urethra; the treatment is continued for a weak at least. You can readily imagine that this method will never be generally adopted, even supposing it to be efficacious.

It is unnecessary for me to dwell on injections containing the acetate of lead, red wine, and other mild astringent substances; these are more or less useful, but I prefer passing at once to a consideration of the more efficacious substances, such as sulphate of zinc, copaiva, deuto-nitrate of mercury, and nitrate of silver.

Injections of sulphate of zinc have been employed in the treatment of gonorrhœa for a great length of time past, and experience proves their efficacy; but with respect to this substance and its use I would make two remarks. In cases of recent gonorrhœa little benefit will be derived from the zinc; but in gleets and cases of long standing gonorrhœa, the effects of sulphate of zinc are truly remarkable. It should be injected in the proportion of one grain to the ounce of some mucilaginous decoction; no advantage is derived from employing stronger injections. The beneficial effects of copaiva, when administered internally, naturally led to the idea of employing it in injection. M. H. Larrey has used it in this way with the best effects, at Val-de-Grace. When the injection has been thrown in, it must be retained in the canal for a few minutes; it is used two or three times a day, and frequently effects a cure in five or six days. Some time ago injections with the deuto-nitrate of mercury were very highly spoken of. Some surgeons went so far as to say that this substance never failed to cut short the most obstinate gonorrhœa. Be on your guard, gentlemen, whenever you hear any particular remedy or mode of treatment praised in this pompous manner.

I tried the deuto-nitrate of mercury on several patients; in some cases I injected five or six drops in a glassful of a mucilaginous fluid, but without any benefit. I then increased the quantity in other cases, and the discharge, instead of stopping, was much increased; I, therefore, abandoned the remedy as useless.

The nitrate of silver, as you know, is a substance which has been of late very extensively employed. In ulceration of the cornea, erysipelas, cutaneous affections, and a great variety of other diseases, it has been used with more or less success. Its action on venereal chancre and syphilitic ulcers of the throat is well known. Opinions, however, are divided on the utility of this substance, as an injection, in gonorrhœa. I have made numerous experiments with the lunar caustic in various quantities; in the proportion of one grain to the ounce of water, I have obtained excellent results, especially in old cases. In four cases I tried two grains to the ounce, and two of the patients were cured in five days. In cases of long standing, then, the nitrate of silver injection is efficacious. In recent cases it may also be employed; but its efficacy is greatly increased by pressure applied methodically to the canal of the urethra. For the latter purpose I employ small compresses, which I apply as exactly as possible along the course of the urethra, from the bulb to the fossa navicularis, and which I support with a small bandage. Before tightening the bandage I inject a solution of one or two grains of nitrate of silver to the ounce of water, and keep the injection in the canal for one or two minutes; this I repeat two or three times in succession, and twice a day. The pressure must be permanent to have any effect; you will be forced, therefore, to renew the bandage frequently, and on this account, perhaps, it might be useful to impregnate it with starch, as we do in the treatment of fracture. I repeat the injections for three days, and then suspend them; if necessary they may be resumed. In this way I have cured five or six patients laboring under gonorrhœa, in whom every other species of treatment had been tried without success.

I must, however, warn you of certain accidents that may occur during this mode of treatment. Thus the glans penis and prepuce may become swollen, livid, or even inflamed; but you need not be alarmed at this, unless you have pushed compression too far. Should the patient be tormented with frequent erections, and suffer much, you must employ baths, lavements, &c., with narcotics, but do not suspend the use of compression unless you are compelled so to do. In the treatment of gonorrhœa with astringent injections, several objections have been made; amongst these there are two which I cannot pass over in silence. First, it has been affirmed that the injection may pass into the bladder, and there excite violent inflammation. This I believe is a mere chimera; and even if inflammation were to arise, we could soon master it by appropriate means. Second, the injections, it is said, often give rise to stricture. This also I do not believe. Stricture is generally the effect of induration of the tissues, caused by long continued inflammation; and we cannot admit that any treatment which cuts short the inflammation can tend to produce its effects. Besides, experience proves that stricture does not follow the use of astringent injections.

In conclusion, gentlemen, I would say that astringent injections are the best remedies we can employ in the treatment of gonorrhœa, especially if the disease be of some standing, and that the nitrate of silver, with compression, is the one which we should select.

GLEANINGS FROM THE FOREIGN JOURNALS.

On Stricture of the Urethra and Hypertrophy of the Bladder.

BY M. CRUVEILHIER.

Stricture of the urethra is the most common cause of retention of urine, and of a majority of the diseases to which the urinary organs are subject.

In my opinion, modern writers have gratuitously multiplied the number of organic changes which occur in stricture of the urethra. For my part, I have never met with more than one species of stricture—viz., the fibrous, or, to speak more correctly, the fibrous degeneration of the walls of the urethra, occupying either a single point of the canal all round, and thus forming the ring-stricture, or extending along the canal to a length of four, six, eight, twelve lines, or more.

Besides, this distinction of strictures, according to their extent, we may admit superficial strictures, which are confined to the mucous membrane, and deep-seated strictures, in which the whole thickness of the urethra is changed into fibrous tissue. With respect to seat, the stricture may occupy any point between the orifice of the urethra and the prostatic portion, but it is almost always confined to the membranous or bulbous portions of the canal. I have never seen a stricture in the prostatic portion of the urethra. The following description of the appearances of different strictures is taken from dissections which were made with the utmost care:—

Stricture—False Passage through the Corpus Cavernosum—Gangrene—Death.

On opening the urethra, a false passage was observed; the instrument had traversed the upper wall of the canal, passed through the corpus cavernosum, and again entered the urethra. The stricture was four or five lines long; it was dense, fibrous, and the change of structure occupied the whole thickness of the canal; some pus was infiltrated throughout the corpus cavernosum, and the cellular tissue of the perineum was the seat of a gangrenous abscess; a portion of the lung was in a state of gray hepatisation.

Perhaps in this case the inflammation of the lung depended on the existence of pus in the corpus cavernosum. In analogous cases I have found numerous abscesses in the liver and spleen. Pus in the corpus cavernosum is placed under the same circumstances as if it were in the veins, and unless it is immediately circumscribed by adhesive inflammation, may pass into the circulation, and produce all the effects of purulent infection.

Incontinence of Urine from Diseased Prostate—Hypertrophy of the Bladder.

An old man, 71 years of age, was admitted into Bicetre, on the 20th of October, 1834, with retention of urine; the latter had been preceded by habitual incontinence, but the patient could give no information on the origin of his disease. A catheter was easily passed into the bladder, and allowed to remain there for fifteen days. It was then withdrawn, because the urine escaped between the instrument and the urethra; the incontinence returned.

The man now fell into a dangerous state; he was sounded every morning, and a small quantity of purulent and excessively fetid urine was drawn off; and although introduced with the greatest care, the end of the catheter was always tinged with blood, and of a very black color when withdrawn. On the 10th of November an urinary abscess formed in front of the scrotum, and the man died on the 14th.

Post-mortem.—The bladder contained a small quantity of purulent urine, and a mulberry calculus as large as a walnut. The walls of the bladder were considerably hypertrophied; this condition, however, was confined to the muscular tissue, and the fatty layer between the latter and the peritoneum. The whole of the inner surface of the bladder was lined with an irregular false membrane. The prostate completely embraced the urethra; around the lower half it was very imperfectly developed, but at the upper was extremely thick and solid. The substance of the kidneys was healthy, but the cavities of their pelvis were livid, and lined with pus; the vesiculæ seminales, also, were distended with pus; and at the lower part of the urethra, in front of the scrotum, there was a large opening.

REMARKS.

From the hypertrophy of the bladder in this case, together with its size, I am inclined to think that the incontinence of urine under which the patient labored so long was a retention with regurgitation. The hypertrophy of the subperitoneal fatty layer would lead to the idea that the bladder remained for a great length of time inactive, and merely allowed the urine to escape as it received it. The coincidence of urinary calculus with disease of the prostate has been frequently observed, and should not be overlooked in the treatment of the latter. We should also remember that the existence of the stone may be overlooked in cases of this kind, from the difficulty of exploring the floor of the bladder; still we can make the proper examination by employing the sounds proposed by MM. Leroy or Mercier for this purpose.

The lobular arrangement of the lower portion of the prostate explains the retention of urine, and also the incontinence, when the lobes which projected into the neck of the bladder were separated from each other, as the organ became distended; they also explain why it was easy to introduce a catheter, which passed along the grooves between the prostatic lobes. The lower half of the prostate, then, was in this case made up of a number of distinct lobes, which projected separately into the bladder. As to the thick portion of prostate which embraced the upper part of the urethra, this has been occasionally seen.

In this and several other cases, I have been able to ascertain that the prostate is contained between two layers of muscle sent off from the bladder; one external and very thick; the other internal, thin, and placed between the mucous membrane and tissue of the prostate; and finally, that the prostate is traversed by a number of muscular fibres sent to it from the bladder. The thickness of the external prostatic layer, and the thinness of the internal one, explain why, in cases of hypertrophy of the prostate, its lobes always project into the bladder, and never externally to it.

The destruction of the walls of the urethra, in this case, and the infiltration of urine which ensued, were occasioned by the permanently keeping a catheter in the bladder. It is worthy of mention that I have never yet seen partial or complete hypertrophy of the prostate coincide with stricture of the urethra; nay, more, stricture of the membranous portion of the canal is almost always attended by more or less complete atrophy of the prostate gland, which often depends on chronic inflammation of the part. The two following facts support this idea:—

Fibrous Stricture of the Urethra—Atrophy of the Prostate.

I found, in a dead body, a stricture of the urethra occupying the bulbous and adjoining membranous part of the canal; it was fibrous, and was from eight to nine lines in length. At the centre of the stricture the fibrous degeneration comprised the mucous membrane and the spongy tissue of the urethra; but towards the extremities it was confined to the mucous membrane alone. The stricture, with the neighboring portions of the urethra, thus resembled two cones applied to each other. The urethra, between the stricture and bladder, was remarkably dilated; the verumontanum was much developed, and connected to the neck of the bladder by several bands. On pressing the prostatic portion of the urethra a small quantity of purulent matter escaped through the orifices in the verumontanum and its neighborhood. The prostate gland, which appeared to be large, was converted into an abscess, divided into two parts by an imperfect septum; the abscess was traversed by numerous filaments, probably the vessels and excretory ducts. The bladder was small and greatly hypertrophied; it was from four to five lines in thickness, and divided, by muscular bands, into pouches, but did not contain any calculi.

Prostate converted into a Cyst containing a Calculus.

A patient was admitted into hospital for a retention of urine, which he said had existed for several years. It was impossible to pass a catheter. The bladder could not be felt above the pubis, and the operation of puncture was delayed. The patient soon died.

Post-mortem.—Bladder very thick; gangrene extending through the mucous and muscular coats, at the posterior part; a white calculus projected into the urethra, immediately in front of the neck of the bladder; the stone occupied the site of the prostate gland, which had been converted into a mere cyst. In the membranous portion of the canal there was a dense, circular stricture; the ureters were dilated and flexuous; the pelvis and calices of the kidneys were also much distended, but the substance of the kidneys was atrophied. The body of the right testicle contained several tubercles, and the epididymis was infiltrated with tubercular matter.

Here the various diseases of the genito-urinary system were probably consequent on the stricture of the urethra. Had the finger been passed into the rectum, the tumor would have been mistaken for an enlarged prostate; had it been known to be a calculus, nothing would have been more easy than to extract it through the rectum.

Circular Stricture—Enormous Distention of the Bladder.

M. Berard presented to the Anatomical Society a bladder enormously distended, and reaching up to the umbilicus; there was a ring-stricture, at about three inches from the external orifice of the urethra. The bottom of the bladder presented a number of small granulations, like millet seeds; these are nothing but mucous follicles, which are invisible in a healthy condition of the organ.

Complete Obliteration of the Urethra—Gangrene of the Bladder.

M. Bose presented to the Anatomical Society the urinary organs of a man in whom the urethra was completely obliterated in front of the scrotum; there were several urinary fistulæ, and the bladder was perforated in three different parts, but the loss of substance was closed by the intestines. An eschar was found in the bladder, exactly similar to the part of the bladder from which it had been detached. Several members of the society thought that it was merely a false membrane, but I am convinced that it was a true eschar.

Stricture—Fistula—Calculi.

M. Thomas presented to the Anatomical Society the urinary organs of a man who had labored under retention of urine for the last twenty years, and who passed his urine pretty freely by introducing a large bougie as far as the middle of the urethra. The man had no children, and having heard that this probably depended on his stricture, he resolved on going into hospital. It was impossible to pass a common sound into the bladder; a conical one was, therefore, introduced, and it was thought that it passed into the bladder, but nothing but blood came away. The man was seized next day with œdema of the glottis, and died on the following day.

The anterior half of the urethra was healthy; from its middle point there passed two canals; one, which seemed to lead to the bladder, was gangrenous, and contained one large and several small calculi; the other was surrounded by dense, fibrous tissue, and led to a large cavity in the prostate gland, filled with calculi. The prostatic pouch communicated with the bladder, and was divided into two compartments by an imperfect septum.

REMARKS.

The fibrous nature of strictnre of the urethra seems to me to be clearly demonstrated, for I repeat that I have never seen any other form of the disease. At the strictured point the mucous membrane of the urethra completely disappears, and the spongy tissue more or less so. If we endeavor to discover the cause of this fibrous degeneration, we shall perceive that it may be explained, by chronic inflammation of the mucous membrane; second, by ulceration. We possess, however, too limited a number of facts relative to the state of the urethra in gonorrhœa to determine the question; for my part, I am inclined to think than strictures are the result of ulceration; for, if we admit inflammation as the cause, it is difficult to conceive how its effects should be limited to a single point of the urethra.

The therapeutic inductions derived from a knowledge of the fibrous nature of stricture are perfectly in accordance with facts. The inconveniences of forced catheterism, and of conical sounds, the superiority of dilatation over cauterisation, the necessity of continning dilatation for a considerable length of time, the tendency of stricture, of return, and the absolute necessity of having recourse, from time to time, to some means of dilatation—these are the therapeutical inductions furnished by the pathological anatomy of stricture.

It is as difficult a matter to re-establish a natural canal, when changed into fibrous tissue, as it is to make an artificial canal. Morbid fibrous tissue has a tendency to become thick and dense under the least irritation.

Statistics of Ampntations performed in the Parisian Hospitals.

BY M. MALGAIGNE.

The number of amputations reported to the committee of hospitals, as having been performed in the Parisian hospitals, from the 1st of January, 1836, to the 1st of January, 1841, amounted to 852. Of these were, one amputation at the hip-joint; 201 of the thigh; 3 at the knee-joint; 192 of the leg; 38, partial, of the foot; 8 of the metatarsal bones; 85 of toes. Total 528, of the lower extremity.

For the upper extremity—14 at the shoulder-joint; 91 of the arm; 28 of the forearm; 16 at the wrist-joint; 9 of the metacarpal bones; 166 of the fingers. Total 324.

The general mortality was 332, or about 2 in 5—viz. 255 for the lower extremity, or nearly one-half; 77, or about one-fourth, for the upper extremity.

1. *Amputation of Thigh.*

One amputation at the hip-joint in a medical student, aged 21, who had been wounded in a duel.

Of the 201 amputations of the thigh, 126 were followed by death, or nearly 62 per cent. It is necessary, however, to distinguish between operations consequent on injuries and those performed for chronic disease.

a. Of the first class, 46; 34 deaths, 12 cures.

b. Of the second class, 153; 92 deaths to 61 cures, or 3 deaths out of every 5 operations.

In addition to these were two amputations, performed successively, by M. Velpeau, on a young man, for anchylosis of both knees, who recovered.

Ages.—Amputations after injuries—From 4 to 15 years, 4 cases, 4 deaths; from 15 to 35 years, 26 cases, 18 deaths; from 35 to 70 years, 16 cases, 12 deaths.

Amputations after chronic disease—From 5 to 15 years, 24 cases, 8 deaths; 15 to 35 years, 90 cases, 52 deaths; 35 to 70 years, 39 cases, 32 deaths.

From the above it would appear that operations on persons of tender age are by no means so free from danger as has been supposed.

2. *Amputation at the Knee-joint.*

This operation had been almost completely abandoned, when it was revived in 1830, by M. Velpeau. The results were so unfavorable that it has again fallen into disuse. Of 9 cases, 7 proved fatal.

3. *Amputation of Leg.*

The number of cases amounted to 192: of these 106 died, about 55 per cent. Of the whole number, 112 were performed in consequence of disease, and gave a mortality of 55; 79 after injuries, with a mortality of 50.

Finally, one young man, affected with club-foot, was operated on at the Hotel Dieu, and died. Here, also, as in the former cases, the mortality amongst young subjects was very great in cases of amputations after injuries; it amounted to 3 out of 4.

4. *Partial Amputation of Foot.*

This was performed in 38 cases, either after Chopart's method, or between the tarsus and metatarsus. The mortality was 9 in 38, or 24 per cent.; but the difference of mortality between operations after injuries and after disease was most striking; in the former case being 6 out of 9; in the latter, 3 out of 29 cases.

5. *Amputation at the Shoulder-joint.*

The danger of this operation has been variously estimated by different surgeons. M. Larrey says that it succeeded in his hands 90 times out of 100; and Percy affirms that of 70 cases about one-sixth proved fatal.

Civil practice furnishes far different results. Of the 13 cases 10 proved fatal; in 7 the operation was performed in consequence of injuries, and all died; in 6, for organic disease, and 5 of these recovered.

6. *Amputation of Arm.*

In 91 cases, 41 deaths, or about 45 per cent. For organic disease 61 operations, 24 deaths; for injuries 30, 17 deaths.

7. *Amputation of Forearm.*

In 28 cases 8 deaths, or 28 per cent. For organic disease 17 cases, 5 deaths; for injuries 11 cases, 3 deaths.

8. *Amputation of Wrist-joint.*

During five years amputation was performed at this joint in 16 cases, and all the patients recovered.

9. *Amputation of Metatarsal and Metacarpal Bones.*

In 8 cases some one of the metatarsal bones was amputated, and 1 death occurred; in 9 cases one of the metacarpal bones, and here also 1 death occurred.

10. *Amputation of Toes.*

The great toe was disarticulated in 43 cases, of which 7 proved fatal. The operation was performed in 29 cases for disease, in 14 for injuries; of the former 3 proved fatal, of the latter 4. The small toe was removed in 26 cases, with 1 fatal result. In 7 cases, where two of the toes were removed together, there was 1 death. Amputation of one or more phalanges was performed in 9 cases, without any accident.

11. *Amputation of Fingers.*

I have not found it mentioned in any treatise on operative surgery that amputation of the thumb is peculiarly dangerous. It was performed in 9 cases; in 1 for a supernumerary thumb; in 3 for organic disease; in 5 after injury; of the latter 5 no less than 3 proved fatal. The number of cases of amputation of a finger amounted to 119, amongst which were 10 deaths. In 79 cases the operation was performed in consequence of organic disease; here the mortality was 6. In 40 cases it was performed after injuries, with 4 deaths.

In 13 cases several fingers at a time were amputated; only 1 case proved fatal. Finally, one of the phalanges was removed in 24 cases, of which 1 ended in death.

Causes which Influence the Mortality after Amputations.

The first question which M. Malgaigne endeavors to solve, is the influence exercised by the cause which gave rise to the necessity of operation. Amputations performed after injuries are more dangerous than those performed in consequence of disease.

Thus, in a total of 789 amputations, we have 524 after disease, 193 deaths, or 38 per cent.; 265 after injuries, 130 deaths, or 49 per cent. This difference is more striking if we separate the capital operations from the minor ones. The mortality then is for capital operations, after disease, 48 per cent.; after injuries, 64 per cent. For minor operations, after disease, 7½ per cent.; after injuries, 15 per cent. Here, then, the influence of a traumatic cause seems more powerful with respect to the minor than the capital operations.

The question, then, appears to be clearly settled, but it leads to a much more important one—viz. that of primary or secondary amputations after injuries. The statistics on which M. Malgaigne computes the relative mortality of amputation, under these two conditions, are 26 amputations of the thigh, and 43 of the leg.

Of the 26, 16 were immediate and 10 secondary; in the former case, there were 12 deaths; in the latter, 6. Of the 43 amputations of the leg, 33 were immediate, giving a mortality of 22; 10 were secondary, with a mortality of 7. If we add all these cases together we have 49 immediate, with 34 deaths; 20 secondary, with 13 deaths. The only conclusion, however, which M. Malgaigne draws, is, that the question requires further examination. Of the causes which render amputation of the thigh necessary, compound fracture from gun-shot wound is one of the most frequent. Most surgical writers advise immediate amputation, but M. Malgaigne is of a different opinion. In 1814, M. Marjolin performed 14 amputations of the thigh for gun-shot wounds, and saved only *one* patient. Again M. Ribes examined the 4,000 invalids collected together at the Hotel des Invalides, without finding a single one who had fracture of the femur with wound of the surrounding soft parts; nor was there a single patient whose limb had been amputated for fracture of the middle of the thigh. Hence, all the soldiers suffering under this accident had either died on the field of battle or after operation.

Influence of Age.

Having shown the influence of sex to be in favor of the female, and particularly that the minor amputations are almost without danger in the female when compared with the male, M. Malgaigne examines the influence of age. Before entering on the subject he refers to lithotomy, which may be compared, in some respect, to amputation for disease. During the six years, 1836 to 1842, the number of operations for stone performed in the hospitals of Paris, with their results, was,

Ages	2 to 5		5–15		15–20		20–35		35–50		50–65		65–80	
Operotions[*]	6	3	28	4	13	4	10	4	3	1	6	5	9	7

Hence, in 75 operations for stone we have 28 deaths; more than a third—a proportion far different from that announced during the discussions on lithotomy and lithotrity.

Tbe influence of age on amputations is shown in the following tables:—

Capitol Amputations ofter Diseose.

Ages	2–5		5–15		15–20		20–35		35–50		50–65		65–80	
Thigh			13	4	24	12	50	32	19	16	8	8	1	.
Leg	2	1	9	.	11	6	24	12	19	7	13	9	2	2
Foot			3	.	4	.	7	.	3	..	3	1	1	1
Shoulder			...		1	.	...		2	2	1	1	...	
Arm			6	3	5	1	21	9	8	3	4	2	3	1
Forearm			1	1	...		3	1	4	1	4	2	1	.
Total, males	2	1	32	8	45	19	105	54	55	29	33	23	8	4
" females	2	1	25	7	21	9	23	9	17	11	7	6	3	1
Both sexes	4	2	57	15	66	28	128	63	72	40	40	29	11	5

Minor Amputotions after Diseose.

Ages	2–5		5–15		15–20		20–35		35–50		50–65		65–80	
Males			7	.	23	1	42	3	23	5	10	.	1	.
Females			9	.	4	.	7	.	10	.	7	1	3	1
Total			16	.	27	1	49	3	33	5	17	1	4	1

Thus, from the above tables, it appears that in young children, the mortality amounts to one half of those operated on; the next period is the most favorable one; we have then a period of decline, until we come to the most unfavorable one, that comprised between the ages of 50 and 65. Between 65 and 80, however, we have a period more favorable than the two preceding ones.

If we examine amputations performed after injuries (traumatic) we find from the tables of M. Malgaigne, that the mortality is excessively great amongst children. Thus of 25 capital and minor amputations after injuries, performed on children up to 15 years of age, no less than 16 proved fatal; the mortality diminishes from 15 to 20; then from 20 to 35, and the most favorable period is from 35 to 50. The following tahle shows that the mortality of hernia follows the same rule:—

Mortality in Operotions for Hernio.

Ages	2–15		15–20		20–35		35–50		50–65		65–80	
Males	2	2	2	2	29	16	26	10	22	18	19	14
Females			1	.	7	4	37	17	38	28	37	22
Total	2	2	3	2	36	20	63	27	60	46	56	36

Influence of Seasons.

The season is supposed hy many surgeons of high authority, to exert some influence on the success of operations. Dupuytren preferred the spring, and after it autumn. M. Velpeau is of the same opinion. Statistics, however, are quite at variance with the generally received ideas on this point. Without following M. Malgaigne through the numerous tables which he gives, we may mention that he shows clearly that the mortality is least in winter for adults, but greatest for young subjects. This, however, only applies to operations performed for disease. The mortality of amputations after injuries does not seem to be influenced in the slightest degree by the season of the year during which they are performed.

Comparative Influence of Hospitals on the Mortality after Amputotions.

Under this head M. Malgaigne investigates a highly curious question, hut as it cannot interest us much, we shall only mention a few points which he has established. His statistical researches embraced nine of the principal Parisian hospitals. The Hotel Dieu has heen generally thought to be very fatal to those who have been operated on within its walls; but amongst the *nine* hospitals it occupied the *sixth* place; la Charité the second place for amputations for disease; the third for amputations after injuries. In the most successful hospital the mortality for the first class of amputations was 1 in 5; in the least successful 9 in 10; thus making the enormous difference of from 20 to 90 per cent.

For the second class of amputations (after injuries), it was 3 in 10 in the most successful hospital; 5 in 5 in the least successful, showing a difference of from 30 to 100 per cent.

If we endeavor to ascertain the cause of this extraordinary difference of mortality after amputations in the different hospitals, we arrive at some very curious and interesting results.

The mortality after amputations is not explained by the general mortality of the hospital, nor by the cost of each patient, for the mortality was least in the hospital which expended least, and greatest in that where the cost of each patient was greatest. The topographical position of the hospital did not explain tbe point, for the most fortunate and the least successful hospital, were placed in exactly the same circumstances with respect to position. Neither did the quantity of air, light, &c. in the wards of the hospitals account for the difference mentioned. The only point which the researches of M. Malgaigne have enabled him to determine relative to the question is, that the mortality diminishes in proportion to the small number of patients entrusted to the care of each surgeon.—*Arch. Gen. de Med., Moy,* 1842.

Statistics of Dislocation.

M. Malgaigne has examined the registers of the Hotel Dieu, and has ascertained that out of 229 cases, 1 occurred between 2 and 5 years, 4 between 5 and 10, 8 between 10 and 15, 29 between 15 aud 20, 32 hetween 20 and 25; 40 between 25 and 30, 48 between 30 and 35, 38 between 35 and 40, 45 between 40 and 45, 51 hetween 45 and 50, 52 between 50 and 55, 51 between 55 and 60, 51 between 60 and 65, 42 between 65 and 70, 19 between 70 and 75, 13 between 75 and 80, 4 between 80 and 90, 1 at 90.

Luxations, then, are rare in early infancy, and rather more frequent towards puberty, at which period they suddenly increase greatly in number; this continues to enlarge up to the fiftieth year, and then, contrary to the general opinion, it remains stationary for the next fifteen years. M. Malgaigne says that the proportion of dislocations between the sexes are as 2.92 men to 1 woman.—*Examinateur Médical.*

---

[*] The number of operations (in this and the other tables) is represented hy the number to the left of the column; that of deaths, by the number to the right.

Difficulties of the Medical Profession not to be Considered as Discouragements.

From the picture that has been exhibited of the innumerable doubts and difficulties which clog the attainment of medical knowledge, and embarrass the application of it to practical purposes, the timid, sceptical, and indolent may be discouraged from studies, apparently so arduous in their prosecution, and so questionable as to the efficiency and utility of their result. But it is not from characters of this description that any good can be expected in any of the useful arts of life.

If a like despondency were to pervade mankind in general, there would be an end to all that enterprise and energy which alone can enable them to act up to their destiny, and follow up those pursuits upon which the perfection of their nature depends.

As the senses would have lain dormant for ever had there been no external objects to stimulate them, so the faculties and virtues which characterise rational nature and civilised life would never have been developed, but through the excitement of those pains, wants, difficulties, and dangers inseparable from human life. By no other arrangement could our duties, our happiness, our mental and bodily perfections, have been bound together in one harmonious and consistent system.

Let us compare the art of medicine, under this aspect, with those of navigation and agriculture.

Had man been furnished by the Creator with wings, by which he could have traversed all seas and oceans, so as to supersede the use of ships, where would have been that hardihood of character and all those ingenious devices which have called forth the active energies and deep researches of the human mind ?

If, contrary to the actual institutions of Providence, the life of man bad been sustained by the spontaneous productions of nature, instead of the products of industry, neither the faculties of the mind nor the powers of the body could ever have been developed ; man would have been little superior to the brutes ; his active and inventive energies would have lain asleep for ever ; there would have been no room for the talents exercised in the procuring of food, raiment, and shelter, nor in commercial intercourse ; all the mutual and endearing ties of social and civilised life ; all trades and professions, arts, and sciences, whether ministering to accommodation or elegance, constituting man's greatest felicity, whether as objects of pursuit or enjoyment, would have been unknown and untasted.—*Sir G. Blane's Medical Logic.*

Lightning Rods.

At a recent lecture delivered at the Royal Institution, Mr. Faraday stated that metals did not form perfect conductors of electricity, their substance, in fact, tending to obstruct the passage of the fluid. Conducting rods, unless great care was taken in their construction, might prove far more injurious than useful, as, if there were other conducting agents near, and *not absolutely connected with the rod*, mischief might result from the lateral spark. An electrician, therefore, would always see that leaden gutters, roofs, &c., are connected with the rod destined to convey the electricity into the ground.

Suffocating Cough.

Mr. Robinson recommends closure of the patient's nostrils with the thumb and forefinger during expiration, and leaving them free during inspiration, when a paroxysm of suffocating cough is present, and he says that in a very short time the patient will be relieved. He adds that he has adopted this plan whenever he had occasion so to do, and always with success.—*Lond. Med. Gaz.*

Otitis and Otorrhœa.

A singular and interesting case of otitis, followed by otorrhœa, and complicated with abscesses, is recorded in the 'Bulletin Général de Thérapeutique' for February. It occurred in the person of an aged man, who had been chef de bataillon under Napoleon. He was attacked with pleuro-pneumonia of the left side, at the same time that he suffered from otitis of the left ear. The antiplogistic treatment removed the pneumonia, but the inflammation of the ear increased, and in spite of local antiphlogistics (general bleedings could not be practised, in consequence of the severity of the treatment for the pneumonia), an abundant sero-purulent discharge took place from the meatus. From this state the patient gradually improved during the two following months, the pain, discharge, &c. diminishing, so as at length to be scarcely perceptible. Shortly afterwards, in consequence of an imprudent exposure to cold, the symptoms returned ; the discharge again became abundant and sero-purulent, the soft parts near the mastoid process were swollen and œdematous, but without pain, and a deep-seated abscess formed in the lower half of the side of the neck, which, when opened, was found to be connected with the meatus auditorius, although the point of communication could not be discovered. Free incisions made in the lower part of the abscess, allowing a perfect passage for the discharge, were found to be of great service, very little secretion being afterwards furnished by the meatus. The sub-acute inflammation of the parts around the mastoid process still continued, and the skin was thin, shining, and of a deep erysipelatous color ; and this state was followed a few days after by the formation of an abscess on the squamous portion of the temporal bone, which emptied itself by the meatus auditorius. When the unfortunate patient was relieved from this he was again subjected to an attack of inflammation in that part of the neck which had been the seat of the previous abscess, the ulcer deepening, assuming an unhealthy character, and its edges, together with the vicinal integuments, becoming red and painful, so as not to bear the slightest touch. The otorrhœa had entirely ceased. The parts beneath were red and swollen, and the lower extremity of the sterno-cleido-mastoideus was hard and thickened, but free from pain. Topical emollients and demulcents slowly restored the parts to a healthy state, and cicatrisation gradually took place without any return of inflammation.

Section of Sacro-Ischiatic Ligaments.

Dr. Frantz has placed a case of narrowness of the lower outlet of the pelvis on record, in which he divided the sacro-ischiatic ligament on either side. His patient was a weakly woman, thirty-five years of age, subject to œdema, and the occasion was her third accouchement, she not having gone her full time in the first and second pregnancy. When he was sent for, the waters had come away, and he found it was a breech presentation, the nates having already entered the cavity of the pelvis. The labor was natural, except that the lower outlet was reduced to a diameter of two inches and a quarter transversely, and two inches and a half from before backwards, by the tension of the sacro-ischiatic ligaments. As it was impossible to apply either the blunt hook or the forceps, no other resource seemed left than embryotomy or the Cæsarian section. Under these circumstances, Dr. Frantz decided on dividing the sacro-ischiatic ligaments, which he effected with the tenotome of Strohmeyer, the midwife drawing the rectum out of the way. The blunt hook was then applied, and the child was easily born. Very little hæmorrhage followed ; a smart fever and diarrhœa followed, the result of a fit of indigestion on the fifth day ; a small recto-vaginal fistula formed, which gradually diminished, so as scarcely to allow, at the end of a few weeks, of the passage of a few drops of liquid fæces when the patient had diarrhœa.—*Journal de Chirurgie.*

Use of Drastic Purgatives.

Two cases are recorded in the 'Bulletin Général de Thérapeutique,' in which the continued use of drastic purgatives cured obstinate cutaneous diseases. The first, a poor, aged woman, who had been troubled with prurigo for upwards of two years, and had been under the care of a medical man, who had directed venesection, alkaline drinks and baths, milk diet, changed afterwards for as generous diet as she could procure; lotions prepared with bitter infusions; and finally, sulphur ointment, from all of which she derived only temporary benefit; was at last ordered by another practitioner to take the tartarised antimony, two grains for a dose. The first not producing any effect, she repeated it of her own accord, when its use was followed by free and abundant stools, but no vomiting. Relief following, the dose was repeated every eight or ten days, the same purgative effect being caused, and the disease gradually disappearing. At the end of three months the patient was cured. The subject of the second case was a woman, fifty-six years old, a patient of Andral's, at la Charité, who was cured of psoriasis by repeated doses of German brandy, a drastic cathartic, composed of jalap and scammony infused in brandy, which equally produced frequent and abundant evacuations.—Mention is made incidentally of another patient of Andral's, who, while laboring under a severe attack of angina tonsillaris, was ordered a powerful cathartic, which produced more than sixty stools, the pulse falling from 104 to 76, and the patient was cured.

Abscess of the Iliac Fossa.

M. Barthelemy recommends in cases of extra-peritoneal abscess of the iliac fossa, the careful and repeated examination of the lumbar region, in order that, if positive indications of the collection of pus can be discovered there, an opening may be made, rather than allow the matter to make its way into the pelvis, where its presence may cause death. He adds, that the opening of abscesses there, is neither difficult nor dangerous, inasmuch as the abscess interposes between the abdominal parietes and the peritoneum. After the operation, the patient should be kept lying on his back, and a tent be passed into the opening, to be replaced the next day by emollient injections.—*Annales de Chirurgie.*

Ioduret of Potassium in Syphilis.

M. Chomel has a high opinion of the use of this ioduret in the treatment of constitutional syphilis. In a case of exostosis of the cranium, attended with severe pain and suffering exacerbations at night, evidently depending on a syphilitic origin, the ioduret was administered, and in less than a fortnight the pains in the head were gone, the exostosis diminished in size; a perfect and lasting cure was the result of a month's treatment. M. Chomel mentions a case in which the effects of this salt were more remarkable. A lady from the country, to whom her husband had communicated the venereal disease, and who had been inefficiently treated with mercurials, had exostoses on the cranium and elsewhere, and suffered severely. She came to Paris, and placed herself under the care of Chomel, who gave her pills containing the bichloride of mercury for three or four months; under this treatment she improved for a while; the nodes diminished in size, and her other symptoms were also better; but the change was not lasting; the nocturnal pains returned with increasing violence. The ioduret of potassium was then had recourse to, and continued for some time, and with such success, that at the end of a few months the lady returned home, still, however, persisting in the use of the medicine, gradually diminishing the dose. In this case the cure has been complete and permanent. Chomel considers the ptisane de Feltz, a composition containing sulphuret of antimony and a little arsenic, of equal value with the ioduret of potassium in the treatment of inveterate syphilis, but he prefers the latter, many persons not being able to take the ptisan or to persevere in its use, while, on the contrary, the ioduret is easy of administration, and does not require any preparation.—*Bulletin Général de Thérapeutique.*

Trichiasis.

M. Alessi considers there are three different varieties of trichiasis, dependant on peculiar causes, each variety requiring special treatment. The first is owing to a relaxation of the skin of the eyelids, and is most frequently the result of chronic ophthalmia. To remedy this, he recommends cauterising, according to Heling's plan. The second variety of inversion of the eyelashes is caused by a deviation of the bulbs, the result of superficial abscesses or pustules formed along the edge of the tarsus, the cicatrising of which has effected a change in the situation of the bulbs. M. Alessi in this case advises the excision of the edge of the eyelids, together with the bulb, taking care, in case both eyelids are affected, that the operation be not performed on both at once, lest a troublesome ankylo-blepharon be the result. The third cause is a shortening of the tarsal cartilage, following its softening from suppuration of the meibomian glands. For the cure of this variety, M. Alessi recommends an operation somewhat similar to that for ptosis—to wit, the dissection of a portion of the skin of the palpebra, sufficient, when the tarsus is brought in contact with the edge of the incised integuments, to cause eversion of the tarsus, in addition to which he incises the conjunctiva from within outwards, so as to separate its connection with the cartilage, and then brings the lips of the external wound together with sutures.—*Il Filiatre Sebezio.*

Wound of the Brain.

M. Velpeau read a report on a case of severe injury of the brain. The patient had a portion of the skull carried away; considerable portions of the brain came away through the opening, or were removed during the subsequent suppuration; but the patient recovered without having been affected with paralysis.—*Paris Acad. Med.*

Abercrombie's Maxims for Medical Men.

1. Cultivate a habit of steady and continuous attention.
2. Exercise strict control over the succession of your thoughts.
3. Keep up an animated, inquiring state of mind.
4. Maintain a habit of correct association of facts according to the relation of cause and effect.
5. Select carefully the subjects to which the mind is directed.
6. Carefully abstract the operation of the judgment from the influence of imagination or passion.

Small Hospitals.

There are only fifteen beds in the hospital of Goettingen, and I do not wish for more. I do not think that the experienced practitioner is formed by the number of patients. Experience is the result not of seeing merely, but of reflecting. It is not eating, but digestion, that gives strength.—*Richter's Med. Obs.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, December 3, 1842.

We have not said much lately respecting medical reform, but we have no notion of allowing the agitation of this matter to sleep. It was indeed not unreasonable to have supposed, as we did anticipate, that before this time, some decisive action would have been exhibited by those who profess to desire the advancement of the best interests of the profession. With the honorable exception, however, of the exertions of Dr. DUKE and his highly respectable associates in Kentucky, we are not aware that any effort has been made to raise the standard of medical education amongst us, and place the profession in its proper position. Professor PAINE took up the subject of medical education in his last introductory lecture at the Stuyvesant Institute, but as we did not hear it, we cannot speak particularly about it. But we have been informed that he defended the present system, as the best one under present circumstances. Even granting, however, that it is so, what measures will Dr. PAINE suggest for the prevention of the admission into the ranks of practitioners, so many unqualified young men? Can any other plan, which bears upon its front such rational guarantee of success, as the establishment in every state of *one* independent board for examining and licensing all medical practitioners, be proposed?

The necessity of medical reform is now universally admitted in Great Britain. 'The conflicting claims of the *nineteen* licensing bodies there,' says the *Provincial Journal*, 'have completely bewildered the poor-law commissioners, and after unavailing endeavors to satisfy all parties, even they have been forced to exclaim that the present state of the law, with respect to the licensing of medical practitioners, is unsatisfactory, fraught with inconveniences and injustice, and only to be remedied by a legislative revision of the present law, and the establishment of a uniform medical qualification, extending over the whole United Kingdom.' Even the corporate medical bodies of the old world, are beginning to be seized with something like a self-reforming spirit, and many of the most distinguished members of the profession, who have heretofore been rather inimical to the advance of improvement, are now fighting on the right side.

Sir JAMES CLARK is among the most recent and prominent writers on the subject. He ably contends for the union of the whole medical profession in Great Britain, on terms of universal equality and uniformity alike of education and privilege. He shows that the separation of medicine from surgery is absurd and injudicious; absurd, because they form parts of the same healing art and are indivisible in practice; injudicious, because such artificial distinction tends to limit knowledge, and produce classes of half-educated practitioners. Sir James then goes on to propose, that the general practitioner having passed through the preliminary examination, should, after an additional period of study, and submitting to the prescribed tests, be eligible to another degree of a higher class, from which physicians and surgeons to hospitals, lecturers, and examiners, might be chosen. To this plan,—which strikes us as very judicious, and not at all impracticable here,—the objection of 'creating different classes in the profession' may be opposed. It is obviated by Sir James in the following manner:—

> As by this regulation all would pass through the first degree, so all would be eligible for the second or higher degree, by devoting an additional period to acquiring a practical knowledge of their profession, and submitting to the prescribed tests. Such a regulation would, at once, do away with all just cause of jealousy between the two grades of the profession, while the knowledge that at any future period he might take the higher degree, would prove a powerful stimulus to the general practitioner to keep up his knowledge with the progress of medical science. This relation of the two grades of medical practitioners being established, there could be no good reason why men so closely connected by education, and so intimately associated in the exercise of their profession, should be ranged in different institutions. It is surely more natural, and would, I think, be infinitely more beneficial to the profession, that the whole should be included in one institution. Make two classes of members in the united body. Let those who take the higher degree constitute the fellows, and be alone eligible as officers for conducting the affairs of the corporation; while the general practitioners, or bachelors of medicine, would constitute the great body of members, and have, under such regulations as upon consideration might be deemed proper, a vote in the election of the officers. As this rule would apply to all, and the fellowship would be open to every member of the body who chose to qualify himself for it by taking the higher degree, no one could complain of being excluded from the fellowship.
>
> The whole profession would thus be united into one body, while the present distinction of physician, surgeon, and general practitioner, would be maintained. All just cause for the discontent at present existing in the profession would be removed. The 'one-faculty' and 'representative' system would be realised, without in the least degree interfering with the present distinctions; such distinctions, on the contrary, would be established upon the only legitimate ground—that of more extended acquirement.
>
> That such a scheme of medical reform would prove most beneficial to the profession generally, cannot, I think, admit of a doubt. It would secure a good and uniform education to every member of the profession; it would knit the whole in one bond of union, and by opening to every member who chose to qualify himself the highest degree

in the profession and the highest offices in the body corporate, it could not fail to raise the character of the whole. It would elevate the general practitioner in his own estimation, and in that of the public. The public would know that every member of this body must have a good education; while the practitioner himself would feel that he formed an integral part of the great body of his profession, the highest honors and offices of which he might attain by qualifying himself for them, and by conducting himself as becomes the member of an honorable profession.

Were such a plan in operation amongst us, who can doubt that a very different and much more judicious selection of Hospital medical officers than in present circumstances, would often be made? Surely. surely, the respectable members of the profession in this country, should awake from their present melancholy indifference to its honor and best interests. Let some evidence be afforded of life and soul with respect to this matter. The good work requires only to be commenced in earnest. Let but a few right-hearted men unite, and set about it, and the army of reformers will soon be numerous enough to effect the revolution.

Why can we not immediately have a CONVENTION summoned to meet in New York, and commence on a permanent basis, the agitation to end in the achievement of a sound, comprehensive medical reform?

Nothing of interest has transpired at the City Hospital for the fortnight past. On last Saturday, Dr. HOFFMAN extirpated a tumor from the scalp, and we are sorry to state that the few students who could gain a sight of the operation, by casual glances between the heads and shoulders of the other surgeons and their assistants, who, as usual, crowded around the table, were favored with another exhibition of that needless and injurious 'poking and fingering,' which we have, on a former occasion, described and condemned. Really, it discovers a great want of politeness in the medical officers of the Hospital, to surround the operating table in such a manner as entirely to interrupt the view of the students. About one third of the spectators left the theatre in disgust on Saturday last. We trust that the present intimation will be sufficient to prevent a repetition of the conduct which has elicited this reproof.

We have received a copy of the Catalogue of the Berkshire Medical Institution for the present year. From this document, it appears that the institution is in a highly prosperous condition. Upwards of one hundred students were in attendance during the recent session.

An Elementary Treatise on Auscultation and Percussion, or the Application of Acoustics to the Diagnosis of Diseases; with a Synoptical Table. By A. RACIBORSKI, M. D., of the Faculty of Paris, formerly Surgeon in the Polish Army, &c. &c. Translated, with Notes, &c. by MINTURN POST, M. D. New York: published by Collins, Keese & Co., No. 254 Pearl street. 1842. 8vo. pp. 269.

This is a very excellent little treatise, and does not need to be heralded by the commendatory notices which are attached to it, some of them written by physicians who know probably as much about auscultation as the man in the moon. We do not know any better 'elementary' work on the important science of which this volume treats, and feel confident that a careful study of its contents will greatly facilitate the progress of the student, when he comes to the perusal of more elaborate treatises. The translation is neat and accurate, and Dr. POST has added many useful notes. The style in which the work is got up reflects credit on its respectable publishers.

Lectures on the Principles and Practice of Midwifery. By JAMES BLUNDELL, M. D., formerly Lecturer on Midwifery and Physiology at Guy's Hospital. Edited by CHARLES SEVERN, M. D., Registrar of the Medical Society of London. Philadelphia: Ed. Barrington & Geo. D. Haswell. New York: J. & H. G. Langley. 1842. 8vo. pp. 442.

The eminently fluent and agreeable style—the large and accurate information—the great experience—and original mind of Dr. BLUNDELL have secured for him a very enviable reputation as a public lecturer. It is impossible to read these lectures without being delighted—it is equally impossible to avoid being instructed. Were these discourses more generally diffused and studied here—were their sound and judicious directions recollected and their salutary cautions observed, we would hear of fewer cases of malpractice. This work forms a complete system of midwifery, with the diseases of the puerperal state and of the infant. It is issued in the last number of the 'Select Medical Library'—the most valuable and cheapest medical work of the kind in this country—and is offered at such a moderate price as places it within the reach of all.

The London Dissector, or Guide to Anatomy; for the Use of Students: comprising a Description of the Muscles, Vessels, Nerves, Lymphatics, and Viscera of the Human Body, as they appear on Dissection; with Directions for their Demonstration. From the Last London Edition. Revised and corrected by EDWARD J. CHAISTY, M.D., late Demonstrator of Anatomy in the University of Maryland. Philadelphia: Ed. Barrington & Geo. D. Haswell. 1842. 12mo. pp. 273.

This is a very useful manual of anatomy; not so elaborate as the 'Dublin Dissector,' but perhaps not therefore less acceptable or useful to the beginner. We have pleasure in recommending it to the favorable notice of students. They will find it of immense service in preparing for examinations.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Traumatic Tetanus successfully treated by the Sesquicarbonate of Iron.

BY GEORGE WOLLAM, M. D.

W. B., æt. 44, tall, muscular, of dark complexion, and rather irregular habits, a neighboring farmer, in returning from market on March 29th, 1840, fell, when a cart-wheel passed over his right hand. On the evening of the same day I was requested to visit him, and found the structure of the thumb much contused and lacerated. I continued to visit him until the 8th of April, when he came to my house to have the injured part dressed; and, as he was going on favorably, I saw no more of him until the 17th, at 9 A. M., when I was summoned to visit him; I found him lying on his left side, in a state, speaking in the language of the illustrious Cullen, of complete emprosthotonos, unable to turn, or even to move himself without assistance; deglutition was accomplished with extreme difficulty; the jaws were capable of being separated to such an extent as to admit of the introduction of a shallow spoon only between the teeth. The pulse was 108; pain in the epigastric region; a haggard appearance of countenance; a fixed prominent eye, with occasional profuse perspiration. On interrogating him with regard to his absence from the 8th to the 17th, he replied, suffering excessive uneasiness from the mere effort of speaking, that he had been advised to betake himself to an old woman at Rotherham, who had treated him up to the latter date. On examining the wound, I found it covered with adhesive plaster, and in a very unfavorable condition; whereupon a bread poultice was substituted for the former dressing, six grains of calomel were given immediately, and, in a few hours after, two ounces of castor oil. Eight in the evening: No alleviation of the symptoms, although the bowels have been freely relieved; sesquicarbonate of iron, two drachms, to be taken every hour.

April 18th, 9 A. M. No alleviation. The iron to be continued, but in increased doses, and exhibited as frequently as possible. 8 P. M. Throat feels easier; no evacuation from the bowels since yesterday evening. The castor oil to be repeated as formerly.

19th, 10 A. M. Can swallow better; speak more distinctly; turn himself in bed; and, when raised, can sit up, but in a bent position. 7 P. M. Met Dr. Shearman in consultation, who suggested a blister along the spine, and the exhibition of calomel and opium; but as there was a decided improvement we agreed on continuing the iron, which was now exhibited to the extent of two ounces in two hours, and persevered in till the 27th, when the patient had so far recovered as to be able to walk abroad. From this period the dose was gradually diminished, and on the 11th of May entirely discontinued, from the disease having completely subsided.

In support of the utility of iron in neuralgic affections, it may be interesting to add that a few weeks since, Dr. Shearman, of Rotherham, had been consulted in a very formidable case of tetanic disease, which had supervened a fortnight previously to his being called. Dr. S., encouraged by the advantages which had been derived by my patient from the use of the iron, likewise exhibited it in the case to which he was called, and with the most perfect success.

The advantages which have resulted from the exhibition of iron in tetanic attacks ought to be promulgated, that the practice may attract the attention of such of our brethren as may be placed in situations and circumstances in which this formidable disease is more frequently met with than this country. Sir James McGrigor observes, 'All things have been fully tried in the army, in hundreds of cases, except iron.' Dr. Elliotson employed iron in three instances, and in two of them successfully; in the third the symptoms were so violent that the patient died within twenty-four hours. The thirteenth volume of the 'Medico-Chirurgical Transactions' contains reports of ten cases treated with iron, and of this number eight were successful. A previous knowledge of the history of my patient, and looking upon tetanus as a neuralgic affection, and the benefit which has often been known to result from the exhibition of this agent in tic douloureux, induced me to prescribe it in the foregoing case.—*Prov. Med. Jour.*

Case of Tumor developed in the midst of the Cauda Equina.

BY W. W. FISHER, M. D.,

Downing Professor of Physic, Cambridge.

The case I am about to communicate came under my observation in January, 1840. The name of the individual affected was Taylor; he was thirty-eight years of age, was a tailor by trade, and had been intemperate in his habits for some time previous to the commencement of his illness. He had about three years before (i. e. in 1837) injured, whilst riding, the lower part of the loins by the back of the saddle, and from that period he began to suffer from pain in the lumbar and sacral regions, which was attributed to rheumatism; the pain gradually became more violent, and extended down the legs, which began to swell. He was obliged to give up work in June, 1839, and became bed-ridden in the September of the same year; he could not, however, lie down, but rested on his hands and knees, in which position I found him when I first saw him. He was then unable to move either his loins or lower extremities; but he had the free use of neck, shoulders, and arms. The pain, which had formerly been chiefly confined to the region of the sacrum, was now more particularly felt across the seat, extending from one ischium to the other. There was great numbness throughout the lower extremities; and although no sensation was in the left leg or toes by touch, nevertheless he complained strongly of a feeling of heat in the parts. There was some degree of feeling, on touch, left in the right leg. The legs were very œdematous; there were large ulcerations on those parts of the knees on which he rested, yet he did not experience pain from them. He was generally sleepless, but did not suffer from headache; his breathing was easy, his pulse undisturbed, and his appetite good. He had difficulty in making water; and his bowels were generally confined, and at times so obstinately constipated as to resist the action of cathartics and purgative injections. An issue had been placed on the region of the sacrum, the discharge from which was thin; this was rendered of a more purulent character by the use of iron, from which he seemed to derive more benefit than from any other medicament, especially as regarded the making of water.

His death took place in May last. He had been able, about a fortnight before it occurred, to place himself on his back, after which the œdema of the legs subsided; there was, however, incontinence of the urine, which was at times mixed with blood. He slept better, and was even able to assist in making a waistcoat about a week before he died.

Post-mortem.—Owing to peculiar circumstances, I was only able to examine the back; imperfect, however, as the investigation was, it furnished me with a morbid product sufficient to account for the peculiarity of the symptoms, and the situation and structure of which must be a matter of interest in pathology. The sacrum seemed more protuberant than usual; this appearance, however, arose from the loins being more depressed. The arches of the dorsal and lumbar vertebræ and the posterior wall of the sacrum were removed; the laminæ of the lumbar vertebræ, as well as their bodies, were partially affected with caries.

Viewed posteriorly, the dura mater appeared to be in its natural state until it reached the extremity of the spinal cord; but from that point to the end of the sacrum it was wanting, so that the mass of tumors was exposed to view. The growth extended more towards the left than the right side of that portion of the spinal canal in which it was situated. The spinal cord was cut across, about the middle of the back, and the inferior portion of it was removed; nearly the whole of the diseased mass came along with it. The dura mater was laid open posteriorly. The cord appeared to be quite sound throughout. The diseased mass had a lobulated form, and although it was traversed by a few of the nerves, nevertheless the greater portion of the latter could be detached from it.

It was difficult to determine the seat of the tumor when examined posteriorly; but anteriorly the dura mater was sound throughout; and the arachnoid membrane, especially at the upper portion of the tumor, could be traced intact between the latter and the dura mater. Here and there processes were observed to pass from the arachnoid to the diseased structure, but they were similar to those met with between the arachnoid and the pia mater in their natural state. The tumor, or rather mass of tumors, on which a great number of vessels were spread, was, as I observed before, surrounded on all sides by the roots of the nerves forming the cauda equina. The lower portion of this morbid growth had the form of a tubercle. It presented several traces of vascularity in the centre, and had a scirrhous appearance; I could not however make any thing out satisfactory with respect to its minute structure. The upper portions of the tumor were softer, and were involved in a fine glistening covering; sections of several portions of them showed them to be composed of a gray, semi-transparent, jelly-like substance, infiltrated amidst reticulated tissue, and marked with sanguineous striæ, several of which appeared like true vessels.

I had not an opportunity of having any part of this morbid growth analysed. I plunged a portion of it in pure alcohol, and as it retained its semi-transparency, I concluded it was not albuminous.

Notwithstanding the researches I have made, I have not yet been able to meet with any case on record similar to the one just described. Amongst the many points of interest which the tumors offer—as, for instance, the region they occupy, the peculiarity of their structure, the symptoms they gave rise to—I shall on the present occasion allude more particularly to one, that is to say, the tissue in which they were developed. There can be little doubt that the disease was seated in the pia mater, a vascular web in which morbid products are more frequently formed than in either of the other membranes of the brain. I have observed in a diseased state of the pyloric extremity of the stomach, the walls of which were greatly thickened, a morbid product, which was seated between the serous and muscular layers, and of which the minute structure was similar to that of the section of the tumor in question.

There exists a great analogy between the pia mater of the brain and spinal cord and the subserous tissue of other organs; and, indeed, where the former is united with the arachnoid, the analogy becomes complete. Observation has led me to consider the subserous cellular tissue as being more frequently than any other tissue of the human frame the seat of morbid products. I shall not however enter at length into this subject on the present occasion, but shall defer till another the statement of the facts on which this opinion is grounded.—*Transact. of Prov. Association, Vol. X.*

Five Cases of the Crowing Inspiration of Children which occurred in the same family.

BY JONATHAN TOOGOOD, ESQ.,

Senior Surgeon to the Bridgewater Infirmary.

1817.—CASE I.—H. I., when about a year old, was suddenly seized, without any previous indisposition, with the following symptoms:—A slight crowing noise was first observed, a feeble distressing cry was uttered, followed by a sudden suspension of breathing and threatening of instant suffocation; the countenance became livid, the eyes starting from their sockets, frothy saliva was protruded from the mouth, the jaw fell, and he remained so long in this state that the bystanders thought he was dead. He was laid in a horizontal position and kept perfectly still, when, after a few minutes, a slight attempt at inspiration was made, which gradually improved, until his complete recovery was established. The contents of the bladder and rectum were evacuated during the attack; his countenance was pale for a long time afterwards. During the next six months he had several slight attacks, which almost invariably commenced during comfortable easy sleep, and were preceded by an expression of pain in the countenance, and, although of short duration, were very distressing. After this time they ceased entirely, and he has grown up to manhood in the enjoyment of good health.

1821.—CASE II.—F. I., his brother, was attacked in the same manner when about six weeks old, and after repeated seizures, suddenly expired in one when fourteen weeks old.

1823.—CASE III.—O. I., another brother, had a similar attack when about a year and a half old, but less violent. These occurred occasionally until he was three years old, when they ceased. He has grown up to manhood in good health.

1826.—CASE IV.—A. I., another brother, began to have the same affection when about six months old, which continued until he completed his fourth year. During this period the attacks were sometimes so violent as to threaten instant death. They were occasioned by crying or passion, and once in consequence of a fall, which brought on so violent a seizure, that there appeared no probability of his recovery. He was kept perfectly still, with his head a little raised, and after two or three minutes he began to breathe again. After this he had slight attacks on crying or losing his breath, but never a serious one; the countenance always became livid, and respiration was suspended, but there was no convulsion, which invariably happened when the attack was severe.

October, 1829.—CASE V.—M. A., a sister, a delicate child, born at eight months, was very well until six months, when she was seized exactly as her brothers had been, without any previous indisposition. These attacks recurred frequently until the end of May, after which time she had slight ones. Convulsions, lividity of the countenance, and evacuation of the contents of the rectum and bladder, always accompanied the attacks. On one occasion she lay apparently dead, when the lungs were inflated, to which her recovery was attributed. In the month of June, when three quarters of a year old, the bones of the head, which had closed as firmly as usual at that period, except the anterior fontanelle, separated again, and the division of the sutures could be easily traced with the finger. After this she appeared to get much better, and the spine, which seemed inclined to bend before, became strong, and although she occasionally made a croupy noise, and had very slight attacks of lividity of the countenance, and temporary suspension of the breathing if she cried much, there was no severe symptom or convulsion. She continued pretty well until the 3d of April following, and was a remarkably active, sprightly child, had eight teeth, and was then cutting the eye teeth. Whilst asleep in the garden she was suddenly attacked, as formerly, but soon recovered. This was supposed to arise from teething, and the gums were freely divided immediately. She now began to show symptoms of hooping-cough, and was often unwell, making a slight croupy noise, which, however, did not appear to hurt her, as she often laughed before it was scarcely over. Her nurse thought it a trick. She appeared to be going through the disease favorably, but on Tuesday night did not sleep as well as usual, from more frequent fits of coughing, and was irritable the next day, scratching those about her on the slightest cause. On the following day (Wednesday) she had another slight attack. Her bowels having been carefully attended to, and the cough having been more troublesome during the night, some ipecacuanha wine was given at eleven o'clock on Thursday morning, which operated well. At one, whilst lying in the nurse's lap, she had a most violent attack, and was, for some time, believed to be dead, but after pouring an ounce and a half of brandy and water down her throat, she slowly, and with great difficulty, recovered. This was followed by convulsion and long continued spasm of the muscles, so that the body was quite rigid and could not be bent, although kept for a considerable time in a warm bath. She appeared to suffer great pain for two hours, after which she became easier, and remained so till seven o'clock, when the spasms returned with equal violence, and recurred every two minutes, affecting the right side chiefly, until five o'clock the next morning. No relief was obtained from the application of leeches, warm bath, the warm water injection, or lancing the gums. About eight o'clock she screamed violently, but she was sensible and took nourishment several times. At ten the spasms returned, but with less violence, but they continued with little variation during the whole of Friday and until Sunday morning, when she appeared to get somewhat easier, and although she was less drawn, and the doubtful grinding of the teeth had subsided, there was still a constant frowning and knitting of the brows, denoting great pain. She appeared sensible during the greater part of Sunday, took food occasionally, and slept a good deal, but it was doubtful whether she saw distinctly; there was no squinting, On Sunday night she became affected with spasmodic twitchings of the muscles, and was sometimes harassed with cough. She had a repetition of her former attacks at four in the morning, and again at ten, from which, however, she soon recovered. Another fit recurred at twelve o'clock, whilst lying perfectly quiet, in which she expired.

The body was examined early on the following morning. It was not emaciated. Upon the removal of the pericranium, the skull-cap presented a natural appearance, the fontanelle not being perfectly cloesd by ossification. It required more than the usual degree of force to tear off the skull-cap from the dura mater, and when this was effected, it was found that a large portion of the membrane adhered to the right parietal bone. The veins were turgid with blood. Between the arachnoid membrane and the pia mater, a substance of a gelatinous nature, rather hazy or milky in color, was diffused nearly over the whole surface. Some fluid escaped from the surface of the brain, but the quantity could not be ascertained. Upon cutting into the lateral ventricles, they were found to be distended with fluid, as was also the communication between these and the third ventricle, which, as well as the iter ad infundibulum, and the iter a tertio ad quartum ventriculum, was also distended with fluid. There was also much fluid at the base of the brain and in the fourth ventricle. The whole quantity amounted to about four ounces. The substance of the brain was softer than natural. The viscera of the chest and abdomen were healthy. No glandular affection could be detected in any of these cases.—*Prov. Med. Jour.*

Typhoid Pneumonia.

Mrs. D., aged 23, a young woman of delicate constitution and slender frame, after several days complaining of lassitude, debility, indisposition to exertion, and depression of spirits, was seized on the 7th of April with shivering, sickness, pain in the head and limbs, stitch in the right side, greatly aggravated by a deep inspiration, and frequent hard cough, &c., and continued getting worse until the 12th, when she sent for me.

I attended immediately to the summons, and found her in bed lying extended upon her back, moaning, and evincing much distress, and from general appearances was at first apprehensive of typhus fever. There was a peculiar anxiety and lividity of countenance, sunken state of the eyes, depression of lower jaw, and much black sordes collected about the lips and teeth. The tongue was dry and brown; the breath extremely fœtid; great thirst; skin hot and parched; urine pale, and undiminished in quantity; frequent hard cough; pain in the right side was constant, and very much aggravated by the cough, and taking a deep inspiration; respiration 40 per minute; pulse 130, weak, and quick; headache; confusion of thought; constipation of bowels.

To take a powder, containing fifteen grains of jalap and four grains of calomel, immediately; to apply a mustard cataplasm to the chest, and to have a dozen leeches applied as soon as possible, and to take two tablespoonfuls of the mixture every two hours:—

Wine of tartar emetic, three drachms;
Tincture of opium, twenty drops;
Syrup of orange, half an ounce;
Camphor mixture, seven ounces.

April 13th. The powder has operated three times during the night, bringing away each time a quantity of dark and offensive fæces. The leeches have been omitted, in consequence of the parties being unable to procure them. Has passed a very restless night, with delirium; pain in the side no better; cough very distressing; pulse 128, and rather fuller and harder than it was yesterday; respiration 43, and much oppressed; mucous rale in the large bronchial tubes; dulness on percussion over clavicle on the right side, near its sternal end; and absence of respiratory murmur in upper portion of right lung.

To be bled immediately from the arm to eight ounces; to have a blister applied to the right side of the chest afterwards; to have a pectoral mixture for the cough, and to take a grain of tartar emetic, and five minims of tincture of opium, and a drachm of syrup of orange peel, every two hours in an ounce of camphor julep.

14th. Has felt somewhat relieved by the bleeding, and has slept at intervals during the night, but at times evinced much restlessness, rambled, and talked very incoherently; appearance of countenance better; sordes about the mouth and lips much removed; headache continues; tongue brown and parched; incessant thirst; pain in the side not so acute; cough not quite so frequent; respirations 39; pulse 126; the blood drawn yesterday buffy, and the coagulum loose; the blister has risen well.

To be bled again this morning from the arm to eight ounces, and to continue as before the mixture and linctus, and to have the hair removed from the head.

15th. The bleeding yesterday produced syncope; has had a better night, and has not been so delirious as on the preceding evenings; pain in the side relieved, and felt only when she coughs; respirations 30, less difficult, and frequent; pulse 90, and very soft; copious perspiration; expectorates freely; cough less troublesome; headache gone; tongue brown in the centre, but cleaning at the edges; bowels have not acted since the night of the 12th.

To take immediately twelve grains of rhubarb, three grains of calomel, and five of aromatic powder, in some jelly; to have another blister applied to the chest; and to continue the mixture and linctus as before.

16th. Continues better; bowels have not acted.

Sulphate of magnesia, one ounce;
Compound infusion of senna, six and a half ounces;
Compound tincture of cinnamon, four drachms. To take an ounce and a half every third hour until the bowels are opened.

After the bowels have been relieved, to continue the tartar emetic mixture draught every four or five hours, and to have some mutton broth.

20th. Has been improving daily since the last report. Cough very much better, and can inspire freely without pain; tongue clean, and all symptoms of fever disappeared. Has continued the tartar emetic draught up to this day, in a state of the most perfect tolerance, having never vomited from the commencement. The breathing and pulse, however, continuing much above their natural standard, the former 27 and the latter 90, the tartar emetic is to be discontinued, and two tablespoonfuls of the following mixture to be taken in its stead every four hours:

Tincture of digitalis, one drachm and a half;
Tincture of hyosciamus, two drachms;
Infusion of Calumba, four ounces;
Water, three and a half ounces.

23d. Patient down stairs. Cough quite gone; dulness of percussion over right clavicle removed; respiratory murmur audible over the whole chest; appetite very good; pulse 75; respirations 24. Discharged.—*Prov. Med. Jour.*

THE COLLATERAL SCIENCES.

Anatomical and Pathological Remarks on Inflammation of some internal parts of the Eye, and, in particular, on Choroiditis as the cause of Glaucoma.

BY J. L. C. SCHROEDER VAN DER KOLK.

This paper, which is published in the Transactions of the Amsterdam Society for the Promotion of Medicine and Surgery, contains, says the British and Foreign Medical Review, some observations of high interest on both the healthy and morbid anatomy of the eye, which we shall give in the author's own words, although differing from him on several points, both as to the truth and novelty of his views.

'The choroid,' he says, 'is nothing but a prolongation of the pia mater of the brain, on which are distributed externally the vasa tortuosa, as they are called, while on the inner surface or tunica ruyschiana, the vessels pass into the most delicate winding ramifications which appear to secrete the pigment. These vessels however by no means terminate at the boundary of the choroid; they go on, as is well known, to the iris, and a very beautiful expansion of them forms the corona ciliaris, or ciliary processes. These processes, which consist of elegant arched folds, are, in my opinion, very important parts of the eye: their folds fit into those of the zonula zinnii, which is placed around the lens, and constitutes the most anterior part of the membrana hyaloidea, or of the vitreous humor. This connection however is, according to my observations, rendered much more intimate by a great number of the finest capillary vessels which pass from the fringe of the corona ciliaris into the zonula behind it, and from which there arise some most important distributions of vessels, which have not yet been accurately enough described. The arrangement has indeed been observed and figured by Henle and other anatomists in the eye of the immature fœtus; in the adult its existence has, by others, been doubted; but, in a most fortunate injection, I have very distinctly filled them in an adult healthy eye, and have found that from the outermost edge of this zonula zinnii, there pass extremely delicate vessels into the hyaloid membrane.

'The vitreous humor is, according to my observations, surrounded by a very thin serous membrane, in which there run some extremely delicate vessels, which can only very rarely be filled with a fine injection. If this membrane be taken off the vitreous humor, (which I once succeeded in accomplishing in an extremely well-injected eye,) one sees that these very delicate vessels are distributed all over it: but without this previous and very difficult injection it is, in consequence of its extreme thinness and transparency, hardly possible to discern the membrane itself.

'The vessels in the membrane, which probably serve for the nutrition of the vitreous humor, arise from a double source. Some shorter ones, which for distinction's sake I shall call vasa brevia membranæ hyaloideæ, come from the outer edge of the zone of Zinn, whence they spread with numerous fine branches over the hyaloid membrane, and especially over its foremost part; others arise from the arteria centralis retinæ, immediately by its branching in the retina. These last are distinguished by their fineness and their straighter course from the vessels of the retina itself, and they pass to the vasa brevia just mentioned: there appear to be four of them, and I call them vasa longa membranæ hyaloideæ.* The vessels of the vitreous humor are thus connected through the medium of the zone of Zinn with those of the ciliary processes and of the choroid: those of the retina, which are very numerous and much larger and more tortuous than those of the vitreous humor, terminate for the most part in the retina itself, but partly, as a preparation which I possess seems to show, unite with the fine vascular network of the zone of Zinn and of the ciliary processes.

'Hence then it appears that the vessels of the choroid connect it with the iris, ciliary processes, zone of Zinn, retina, and vitreous humor. But from this general union there arise some still finer vessels. In the minutely injected eye already mentioned, it appears that some very delicate branches pass from the anterior edge of the zone and ciliary circle to the anterior surface of the capsule of the lens, (in a course, however, different from that which they have been described as taking in the fœtus.) The branch of the arteria centralis retinæ, which in the fœtus perforates the vitreous humor to distribute itself in the posterior portion of the capsule, completely disappears at a later period, and is, I suspect, replaced for the nutrition of that part by some very small branches from the zone; this, however, I have never been able to prove by injection.

'Besides these vessels there appear also to be some serous ramifications, (which in a healthy eye are too fine to be artificially filled,) passing from the outer edge of the iris over the posterior surface of the cornea in the membrana Demoursii; at least, in a chronic inflammation of the eye they may be so dilated as to be filled with a fine coloring material, and in this state I possess an excellent preparation of them.

'Hence, then, one sees that the place from which most vessels ramify into the internal parts of the eye, and which is thus in the highest degree important, is constituted by the meeting of the vessels of the choroid and ciliary processes with those of the zone of Zinn and retina, from whence other minute branches distribute themselves into the capsule and the hyaloid membrane.'

---

* These last vessels have been injected by Mr. Dalrymple. (Tyrrell on Diseases of the Eye.)

From this general anastomosis of the vessels of the choroid, the author thinks that its affections must have a more important influence than is generally supposed in inducing morbid changes in other parts of the eye. But his chief purpose is to show that the cause of glaucoma is a chronic inflammation of the choroid, and a consequent effusion of plastic lymph between it and the retina. The serous character of the membrane renders effusion of lymph the most natural result of its inflammation, and all the signs of glaucoma may be explained better by supposing this to have taken place than in any other way. The fulness of the eyeball, by the addition of serum and lymph to its contents, gives that sensation as if the eye were bursting, which exists in the early stages. The pressure of the retina from behind forwards, producing partial paralysis of it, an alteration from its due relation to the focus of vision, and a diminution of the anterior chamber, accounts for the loss of sight, a loss which, though it varies in its degree, is always more than is proportionate to the change of color. The color of the effused lymph, while it is yet soft and transparent, produces no evident change in the aspect of the pupil, though the loss of sight may be considerable; but when it is condensed it gives the peculiar hue of glaucoma, and that deep and concave appearance, as if it came from some distant hollowed surface, which cannot in any way be reconciled with the common notion that glaucoma depends on any change of the vitreous humor. With the effusion of lymph there probably also exists a diminished secretion of pigments, giving rise to the altered color of the iris, and having some share in producing the glaucomatous hue. The immobility and dilatation of the pupil indicate an affection of the ciliary nerves: and its being generally increased in width (so as to be like the pupil of a ruminant,) renders it probable that the dilatation depends, not on any disease of the retina, but on an affection chiefly of the long ciliary nerves which run horizontally by the two long ciliary arteries.

The morbid appearances found in glaucoma confirm the view of it which is here taken. The vitreous humor has never been seen to have the peculiar color: wherever it has been altered at all, its color has been yellow or gray or reddish; and these changes, in all probability, ensued subsequently to the change in the choroid. Neither can an amber hue of the lens account for the color; for this change is by no means constant in glaucoma. A diminished secretion of pigment, which the author has observed in two cases of glaucoma, will not better account for the peculiar color; for the tinge resulting from this defect is gray, and when it exists in an extreme degree, as in albinos, there is certainly no greenish hue. The real source of the peculiar character of the disease was indicated by two cases which the author was able to examine after death. In the eye of an old woman, affected with amaurosis and distinctly glaucomatous, he found a layer of plastic lymph between the choroid and retina, somewhat more than a line in thickness, occupying the posterior half of their circumference, and already seeming to contain some small vessels. In another eye he found a similar effusion in a more advanced stage, the glaucoma having existed six years, and the lymph being more organized.

Such is the chief evidence for the author's explanation of glaucoma.

The remainder of the paper is occupied by criticisms of the opinions which others have held on the nature of this disease, and contains, besides, some miscellaneous observations on the anatomy and diseases of the eye; among which the author denies (absurdly we think) the existence of the membrana Jacobi, which he considers as nothing but a precipitate from the serous fluid which always exists between the choroid and retina. He observes, also, that that which is commonly described as an ossification of the retina, is in reality an ossification of a membrane between it and the choroid (a fact noticed by Van der Lith;) and he describes and figures remarkable cases, in one of which he succeeded in injecting the vessels of the anterior part of the capsule in cataract with chronic inflammation of the capsule, and in another injected a fine vascular network in the membrane of the aqueous humor which had been similarly affected.

ITEMS AND INTELLIGENCE.

Important Medico-Legal Case.

Death after a Blow—Bursting of an Aortic Aneurism into the Left Bronchus.

On the 8th of February last Mr. James Goss, second master of her Majesty's ship Impregnable, then lying in Malta Harbor, struck a man named Edward Purvis on the face. Purvis stooped down, picked up his cap, appeared violently excited by the blow, shouted passionately that he would go and report Mr. Goss to the captain, ran up the main ladder, and then again on to the upper deck; but instead of proceeding to the captain, he suddenly rushed to a water-bucket, and began to drink, and immediately afterwards to eject an immense quantity of blood from the mouth. In five minutes more he was dead, probably seven minutes from the time the blow was inflicted. Dr. Martin, deputy inspector, with the surgeons of some of the ships in harbor, were directed to form a board of inquiry upon the cause of the man's death, and Mr. Wells, assistant-surgeon of the Malta Hospital, was directed by Dr. Martin to make the post-mortem examination in their presence. The following is the report of the surgeons drawn up after that examination:—

Her Majesty's Ship Impregnable,
Malta, February 8th, 1842.

Sir:—In compliance with your order we have this afternoon examined the body of Edward Purvis, late quarter-master of this ship, who died this morning, and found as follows:—There was no external mark of injury whatever on the body; there was a considerable quantity of frothy mucus tinged with blood exuding from the mouth and nostrils; and the external veins of the body were unusually turgid.

On examining the chest we found the left lung greatly engorged with blood, and on removing it from the body the whole of its substance, together with the air passages, were found filled with blood. There were strong adhesions of the right lung to the side of the chest, with extravasation of blood, but not to the same extent as in the left lung.

There was an aneurism of the arch of the aorta where it crosses the windpipe, about the size of a large walnut, and the aneurism had burst into the windpipe.

Absorption of the anterior portions of the bodies of the fourth and fifth vertebræ had taken place, which had evidently been caused by the pressure of the aneurism.

The heart was of the usual size, and apparently healthy. The stomach was healthy, but contained a large quantity of blood mixed with its contents. The other abdominal viscera were sound, nor was there any disease to be discovered in the brain or its appendages.

We have the honor to be, &c.

H. Leyson, Surgeon of H. M. S. Impregnable.
J. Wilson (D), Surgeon of H. M. S. Vanguard.
C. M'Arthur, M. D., Surgeon of H. M. S. Howe.

On the 17th of February, a court-martial, of which

Rear-Admiral Sir John Louis, Bart., was the president, assembled for the trial of Mr. Goss, when the principal defence of the prisoner, of course, was founded upon the medical evidence. Dr. M'Arthur declared that 'from the appearance of the aneurismal sac, it must have been on the point of bursting for some time previous to the deceased's death.' Dr. Leyson deposed that 'the deceased could not, under the circumstances of the disease, have lived any length of time;' and he said he thought the bursting of the blood vessel had no connection with the blow on the cheek. Dr. Martin also stated that 'the blow on the cheek could not have produced the bursting of the aneurism.' Under these circumstances the court declared the charge 'proved in part,' and condemned the prisoner to be dismissed from her Majesty's service.

We are not aware of any case on record similar to the above. Gordon, Smith, Mott, and Dupuy, give cases in which, under violent fits of anger, a large abscess of the liver had burst into the peritoneum; an abscess in the parietes of the heart had burst, causing rupture of the left ventricle; and a rupture of the duodenum was found without marks of external injury. But in none of these cases had there been any blow. Christison relates the case of a man who got two blows, on the nose and forehead, and died in seven minutes; on dissection, half a pint of reddish serum was found in the ventricles of the brain. It appears plainly that, in the above case, violent excitement caused by the blow occasioned the bursting of the aneurism, and that any excitement, equal in degree, would probably have had the same effect; but it still is difficult to deny that the blow caused death. It is impossible to say how long a man might live with a small aortic aneurism; and it is evident that death, at any rate, was *hastened* by the blow. Still, as it has been held that previous injury or disease forms a good exculpatory plea, if the new injury was inadequate to cause serious mischief in ordinary cases, and that the previous disease rather than the new injury caused death, the sentence was probably fair. Goss was acquitted of manslaughter, but dismissed the service for having struck the blow. How would this compromise have been effected in civil courts?

The morbid preparation in this case will be an exceedingly interesting one, and we understand that it has been preserved by Mr. Well's for the museum of Haslar Hospital.—*Prov. Med. Jour.*

Doctors.

Jean Jacques tells us that, when his wife died, every farmer in the neighborhood offered to console him by one of their daughters; but that a few weeks afterwards his cow having shared the same fate, no one ever thought of replacing his loss by the offer of another; thereby proving the different value people set upon their cows and children. This seems absurd enough, but is it a bit more so than what is every day taking place in professional life? How many parsons are there who wouldn't lend you five pounds, would willingly lend you their pulpit; and the commonest courtesy from an hospital surgeon is, to present his visitor with a knife, and entreat him to carve a patient. He has never seen the individual before; he doesn't know whether he be short-sighted, or nervous, or ignorant, or rash; all he thinks of is doing the honors of the institution; and although, like a hostess who sees the best dish at her table mangled by an unskilful carver, he suffers in secret, yet is she far too well-bred to evince her displeasure, but blandly smiles at her friend, and says 'no matter, pray go on.' This, doubtless, is highly conducive to science; and as medicine is declared to be a science of experiment, great results occasionally arise from the practice. Now that I am talking of doctors, what a strange set they are, and what a singular position they hold in society! Admitted to the fullest confidence of the world, yet by a strange perversion, while they are the depositories of secrets that hold together the whole fabric of society, their influence is neither fully recognized, nor their power acknowledged. The doctor is now what the monk once was, with this additional advantage, that from the nature of his studies and the research of his art, he reads more deeply in the human heart, and penetrates into its most inmost recesses. For him, life has little romance; the grosser agency of the body reacting ever on the operations of the mind, destroys many a poetic day-dream and many a high-wrought illusion. To him alone does a man speak, 'son dernier mot:' while to the lawyer the leanings of self-respect will make him always impart a favorable view of his case. To the physician he will be candid, and even more than candid—yes, these are the men who, watching the secret workings of human passion, can trace the progress of mankind in virtue and in vice; while ministering to the body, they are exploring the mind, and yet, scarcely is the hour of danger past, scarcely the shadow of fear dissipated, when they fall back to their humble position in life, bearing with them but little gratitude, and strange to say, no fear!

The world expects them to be learned, well-bred, kind, considerate, and attentive, patient to their querulousness, and enduring under their caprice; and, after all this, the humbug of homœopathy, the preposterous absurdity of the water cure, or the more reprehensible mischief of mesmerism, will find more favor in their sight than the highest order of ability, accompanied by great natural advantages.

Every man—and still more, every woman—imagines himself to be a doctor. The taste for physic, like that for politics, is born with us, and nothing seems easier than to repair the injuries of the constitution, whether of the state or the individual. Who has not seen, over and over again, physicians of the first eminence put aside, that the nostrum of some ignorant pretender, or the suggestion of some twaddling old woman, should be, as it is termed, tried? No one is too stupid, no one too old, no one too ignorant, too obstinate, or too silly, not to be superior to Brodie and Chambers, Crampton and Marsh: and where science, with anxious eye and cautious hand, would scarcely venture to interfere, heroic ignorance would dash boldly forward and cut the Gordian difficulty by snapping the thread of life. How comes it that these old ladies, of either sex, never meddle with the law? Is the game beneath them, where the stake is only property, and not life? or is there less difficulty in the knowledge of an art whose principles rest on so many branches of science, than in a study founded on the basis of precedent? Would to heaven the 'Ladies Bountiful' would take to the quarter sessions and the assizes, in lieu of the infirmaries and dispensaries, and make Blackstone their aide-de-camp, vice Buchan retired.—*Dublin University Mag.*

Institution of Foundling Hospitals.

Magdalenism and foundling hospitals were the offspring of the middle ages; and at a time when the darkest ignorance prevailed, and Christianity was most corrupt, charity was busied with works, such as were never dreamt of in the most enlightened days of Greece and Rome. The induction of abortion was almost universally practised at Rome, infanticide was extremely common, and desertion of children was practised by persons in all ranks of life. But there was no foundling hospital at Rome; and no one saved the lives of these poor infants, except wretches who, after having blinded or mutilated them, sent them to beg in the streets, and lived on their earnings.—*British and Foreign Medical Review.*

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, DECEMBER 10, 1842. No. 24.

LECTURES.

ON THE EVOLUTION OF LIGHT FROM THE LIVING HUMAN SUBJECT.*

BY

SIR HENRY MARSH, BART., M. D.

Having obtained from an unquestionable and authentic source an account of a phenomenon of a very curious and interesting nature, not hitherto recorded or brought into public notice, I am induced to bring forward some facts I have been able to collect, illustrative of the spontaneous evolution of light from the living human subject. But as the evolution of light, or phosphorescence, as it is commonly called, has been observed throughout the various kingdoms of nature, to render the subject more intelligible, and to obtain some clue to its interpretation, I shall, antecedently to the statement of these facts, take a bird's-eye view of luminous appearances as they are exhibited in bodies inorganized, and in those that are organized. I shall use the term 'phosphorescence' as synonymous with the property of emitting light or being luminous, without at all implying that the presence of phosphorus is necessary to the production of the effect.

The only bodies in nature we know of, which permanently and uniformly emit light, are the sun and the fixed stars—we may regard them as perfect specimens of luminous bodies. From what source this never-failing property arises we can scarcely even conjecture—all we know is, that, during the lapse of countless ages, the property of irradiation has remained in them unaltered, undiminished. Not so with bodies placed under our immediate cognizance; in them a peculiar combination of conditions and circumstances is necessary to give them this property—a property of which, under other and different conditions, they are capable of being wholly deprived. Some substances, in which heat is accumulated to an intense degree, become luminous; for instance, if heat be gradually communicated to a piece of iron, the first effects will be merely an enlargement of dimensions, and an elevation of temperature. If the room be darkened, and the process be continued, the metal, previously invisible, will become visible, and will not only be seen itself, but will also enable surrounding objects to be seen; in fact, it will emit light—it is, in common language, red-hot.

Under a great variety of circumstances, inorganic bodies are rendered luminous and emit light. Bodies transparent, or opaque—colorless, or variously tinted—the diamond, arragonite, strontia, marble, calcareous spar, lime, and various stones, possess this property.

A species of fluor spar, found in the granite rocks of Siberia, shines in the dark with a very remarkable phosphoric light, which increases when the temperature is raised; its light augments when it is plunged into water; in boiling water it is so luminous, that the letters of a printed book can be seen near the transparent vase which contains it; in boiling oil the light is still greater, and in boiling mercury it emits such a brilliant light that we may read by it at a distance of five inches. Many bodies which shine by insolation or heating, may be rendered luminous by friction, by percussion, or by concussion. A similar effect results from chemical action and reaction, as is evinced in the ordinary process of combustion; the color of the light varying according to the nature of the burning body. Luminous appearances have been observed to take place in many salts held in solution, as acetate of potash and sulphate of soda at the time when crystallisation is going forward; this is an interesting and beautiful phenomenon.

By the agency of electricity many bodies can be rendered luminous; if a series of electric discharges be transmitted across fragments of chalk, sulphate of barytes, sugar, quartz, or succinic acid, they shine for some time after with a brilliant light. The Aurora Borealis, or Northern Lights, are clearly ascertained to be electrical phenomena; they are beautiful exhibitions of luminous objects. That they spring from an electrical origin is proved incontestibly by the fact that they disturb the magnetic horizontal needle; this has been established by the observations of Arago and others. Mr. Edward Cooper has lately been employed in making some very interesting investigations into the nature of shooting-stars, which lead to the conclusion that they also are exclusively of electric origin.

A very singular phenomenon has been occasionally observed at sea, the origin of which is also undoubtedly electric. In particular conditions of the atmosphere, a lambent flame, of phosphoric hue, has been seen flickering about the mast-heads or extremities of some of the spars of a ship, to the great terror and astonishment of the crew. It has thus been described by an accurate observer: 'I looked forth and saw a pale, greenish, glow-worm colored flame, of the shape and size of the frosted glass shade over the swinging-lamp in the gun-room. It drew out and flattened as the vessel pitched and rose again; and as she sheered about, it wavered round the point that seemed to attract it, like a soap-sud bubble blown from a tobacco pipe before it is shaken into the air; at the core it was comparatively bright, but gradually faded into a halo.'

Major Bonnycastle, in his Canadian Tour, gives an account of a very singular electrical phenomenon observed by him upon the ocean:—he says, 'About two in the morning the mate suddenly roused all the sleepers in their hammocks, by calling loudly for the master to come on deck, as he observed a most unusual appearance on the lee-bow. The weather had been cold, but there was a clear starry firmament, when in a moment the heavens became overcast to the southward, and an instantaneous and intensely brilliant light, resembling a fiery Aurora, shot out of the sea, and rendered every thing minutely discernible, even to the mast-head. The mate and his watch immediately put the helm down, calling up the whole crew, and awakened the captain; but before this was accomplished, the light had spread more vividly than ever over the whole sea, and the waves, hitherto tranquil, became much agitated, while thick dark clouds from the land seemed to threaten dreadful weather. The spectacle continued to increase in beauty. The whole sea, as far as could be seen, was at length one entire sheet of an awfully brilliant flame, above which shone, along the base of the high, frowning, and dark land abreast of them, a long and magnificent line of fire. The fish, plentiful in these latitudes, and of a large size, seemed alarmed; long, tortuous, darting lines of light, in a contrary direction to the sea, showed immense numbers of large fish flying about as if they were lost. The wind, which had increased a little, had a peculiar hollow sound; and after a length of time passed in contemplating this splendid and extraordinary scene, day broke slowly, the sun rising very fiery and gloomily.' 'To sail on a sea of fire,' the writer observes, 'is the only similitude I can fancy to this really awful scene. I have frequently seen the waters of the ocean on fire, as it is vulgarly termed; but then only in small masses, and no more to be compared to what we there witnessed than a November day, when the sun passes murkily through the fog of England, is to the bright and glorious appearance of that luminary on a fine day in the tropics. The oldest sailor in our vessel had never witnessed any thing bearing even a distant resemblance to it, except the master, who asserted that he had once seen something very like it somewhere in the Trades. The brilliancy of the light may be conceived, when I say that the sprit-sail yard and mizen-boom were lit by the reflection, as if they had had gas-lights suspended to them; and before the day broke, at four o'clock, I could see the most minute objects on the face of my watch. This appearance came first from the north-west, and there had been a slight Aurora about eleven o'clock.'

---

* This paper, on the Evolution of Light from the Living Human Subject, was read by Sir Henry Marsh before the King's and Queen's College of Physicians, in November, 1838. On the 10th of June, in the following year, he brought the subject before the Royal Irish Academy, and an abstract of his paper was published in the proceedings of that body for the year 1839.

In the present essay he has appended to the original communication additional information, which he has subsequently derived from undoubted authorities, and has availed himself of more recent researches on the subject of animal luminousness.

In all the instances of natural or artificial phosphorescence which come under observation, that electricity plays an important part cannot be doubted.

The recomposition of the electricities resulting from mechanical separation, or from chemical decomposition, is the immediate source of the evolution of light. It must not, however, be concluded that in all instances in which chemical action occurs, a phosphorescence shall be exhibited. In all such cases the opposite electricities are developed, but light is only produced when the substance of the chemical change is an imperfect conductor of electricity. Electrical *decomposition* then results from mechanical disintegration or chemical change, and it is to the *recomposition* of the elementary electric fluids that we are to look for the resulting heat and light.

I have lately been informed of an experiment made on the Continent, with reference to phosphorescent electricity, which I may mention, though in our hands it has been unsuccessful.

It consisted in putting muriate of barytes upon a plate, in a dark cellar, and placing the hand beneath it, when, as soon as the warmth of the hand had penetrated the plate, the hand was exactly delineated in phosphoric blazes on the upper surface of the plate.

If, from inorganized bodies, we direct our views onwards, and consider those which are organized or endued with vitality, some phenomena of a very curious and interesting nature demand our consideration—phenomena which present themselves in organic bodies just at the time when the vital actions are yielding up their authority, and the laws of chemical action, hitherto controlled by the vital, have begun to triumph. At this time, and under the influence of peculiar conditions of humidity and temperature, the laws of chemical action are called into operation, and the bodies, vegetable or animal, thus circumstanced, exhibit sometimes in a very remarkable manner the phosphorescence of which we treat; they are rendered either faintly or brilliantly luminous.

This is expressed in the following words by Becquerel:—'In fishes, the phosphorescence manifests itself when they are found in that peculiar state of decomposition which precedes putrefaction. It appears that it displays itself during the struggle which takes place between the forces of organic and inorganic nature, inasmuch as it ceases altogether when the latter is triumphant.'

Wood, particularly the root, becomes luminous and evolves light under these circumstances. A gentleman told me he was much surprised not long since, on returning home late at night, and passing the entrance-gate leading to his house, to observe a luminous appearance which shone clearly in the dark. On noting the spot and visiting it next day, he found the decaying stump of a sycamore tree; he found, on further investigation, that it shone most brightly in the middle where it was the softest part of the wood.

The pith of many plants shines; soft spongy woods, as the willow and poplar, are particularly luminous; but the more solid woods, as the elm, beech, and oak, do likewise evince this phenomenon. The necessary conditions are a medium temperature and humidity; extremes of temperature and desiccation destroy this property. Wood which shines in atmospheric air, or oxygen gas, consumes oxygen and produces carbonic acid gas, thus identifying it with a very slow process of combustion; the presence of phosphorus—for phosphate of lime has been ascertained to exist in the ashes of many woods—may have some share in conducing to this effect—an effect of which the farmer is well aware, when his valuable mass of vegetable matter is subjected to this slow process of what we may term spontaneous combustion. Thus it is that accumulated masses of vegetable matter, as hay and corn, not sufficiently dried, undergo fermentation, and if the process be not interrupted, evolve light and caloric, and are destroyed by combustion. The degrees of heat and moisture, which, in the living grain conduce to vegetation, and in the process of malting convert starch into sugar, are those which in the decaying vegetable produce slow combustion. The far-famed ignis fatuus is a phenomenon which, like those already alluded to, is produced by electricity, the result of chemical action in vegetable matter in a state of decay, when the temperature is in neither extreme, and humidity sufficient to lend its aid in producing the effect; accordingly it is in damp and moist situations that it is most frequently seen. The Draco volans, in meteorology, is a fiery exhalation frequent in marshy and cold countries, and dependent on the same causes as the ignis fatuus; it is most common in summer, and though principally seen playing near the banks of rivers, or in boggy places, yet sometimes mounts up to a considerable height in the air, to the no small terror of the amazed beholders. Its appearance is that of an oblong, sometimes roundish, fiery body, with a long tail.

Dr. Martin H. Lynch has lately favored me with the following account of a remarkable phenomenon, observed by him on a bog in the county of Galway, about the latter part of January, 1836. He says, 'I left Clifden, County Galway, about half-past six in the evening, to visit a kinsman at Lavally, in the same county, and distant sixty-three English miles. Being the only medical man resident in a very extensive district, and physician to a public institution, it was essential that my absence should be as short as possible; therefore, having transacted professional business during the day, I started in the evening to travel all night, and proceeded on horseback—the most rapid mode in a mountainous country. It was my intention to stay for two or three hours at the small thatched inn, so well known to tourists, which is distant twenty-one miles from Clifden, on the road to Galway town. The night was rather dark but very calm; during the day I had ridden several miles in the neighborhood of Clifden, but had not noticed the slightest crust of ice, the absence of which I fancied was owing to the insular and well-sheltered situation of Clifden; for, about half way between Clifden and the inn before alluded to, I began to hear the sharp sounds produced, as I then supposed, by the cracking of the ice in the drains on either side of the road. To those who have never seen a moss or bog, it may be well to mention that the cantering, or even trotting of a horse, is sufficient to agitate a bog-road so as to crack the ice in the drains on either side.

I now observed that it became much darker, and, I thought, foggy; the darkness was so impenetrable, that for safety I was compelled to refrain from guiding in the slightest degree the sagacious and enduring Achill pony that I rode, being convinced, that under such circumstances, his judgment was more to be depended on than my own. Had I acted otherwise, it is not improbable man and horse would have perished in a bog-hole, or have been drowned in some of the numerous lakes, along which the unfenced road ran like a pier or quay.

A few minutes after I had noticed the increase of darkness and the cracking sound, I was suddenly dazzled by immense cones of fire rising on all sides around me; these cones varied in magnitude, few had less than five or six feet diameter at the base, and many appeared to measure twenty or thirty feet at the same part. The number visible at any particular moment varied, but, as well as I can remember, rarely exceeded thirty. They sprung up at irregular distances from each other and from me, and soon disappeared to be succeeded by others. Some seemed nearly a mile distant, others a few yards only. The form of each might be compared to that of the flame proceeding from a plate containing burning alcohol. The shade of color accompanying the flame was not blue; it was a reddish white, but at this distance of time I cannot speak positively on this point. The light proceeding from them was not in proportion to their size and number; even at the moment I was amazed to find that, although they dazzled and occasioned dizziness by their sudden appearance and disappearance, they produced but little effect on the profound darkness. These appearances continued for several miles; the cones of flame rose from the ground apparently to a height varying from six to thirty feet, and did not, like 'Will o' the wisp,' move to and fro. A little after midnight it began to blow freshly from the north-east, with heavy rain; but during the remainder of my ride I did not see any trace of even the slightest flickering or flame.'

The destructive fire, which, a few years since, reduced to ashes the stores of the Dublin Custom-house, was supposed to have originated in the spontaneous combustion of cotton and other vegetable matters, and, more recently, the mysterious fires at the royal dock-yards probably owed their origin to the spontaneous ignition of oily substances mixed with tow and carbonaceous matter.

In a late number of a scientific journal, attention is directed to the circumstances in which combustion takes place from the decomposition of such materials. The writer observes, 'It is a fact, better ascertained than accounted for, that fixed oils, when mixed with any light kind of charcoal, or substance containing carbon, such as cotton, flax, or even wool, which is not of itself inflammable, heat by the process of decomposition, and, after remaining in contact some time, at length burst into flame. This spontaneous combustion takes place in waste cotton which has been employed to wipe machines, and then thrown away, and allowed to accumulate in a heap. We have known an instance of the kind in a manufactory for spinning worsteds, where the waste wool or 'slubbings,' as it is termed in Yorkshire, was thrown into a corner and neglected. It then heated, and was on the point of bursting into flame, when the attention of the workmen was directed to the heap by the smoke and smell. In cotton mills the danger exists to a still greater degree, and it is believed that the destruction of many cotton factories has been occasioned by this means. The cause of this peculiar property of fixed oils deserves more attention than has hitherto been paid to it.'

Ships also, laden with cotton, have been destroyed at sea, by fire originating in the spontaneous ignition of the cargo. It is, however, in recently dead *animal* matter, during the incipient stage of decomposition, that the phenomenon of phosphorescence or luminousness is most strikingly exhibited; this is observable in the perishing materials of the mammalia, birds, amphibia, and, most remarkably in marine and even fresh water animals. Soon after death fishes become exceedingly luminous; the mackarel (scomber scombrus,) for instance, dies as soon as it is taken out of the water, and very shortly afterwards emits a phosphoric light. Dr. Jacob has informed me that in a dark cellar, where are deposited his marine specimens, he has been able to read lines in a book placed near a decaying and luminous fish; this he has observed to appear before the least putrefactive odor was perceptible, and on passing his hand over the fish his hand became luminous, as if it had been smeared with phosphorated oil.

I remember in the days of my boyhood, a painful occurrence, which had nearly led to a fatal issue; it was a dangerous trick practised on a timid youth: a fish, brightly luminous, was waved backward and forward in a dark room through which he was passing. The terror excited by this unexpected luminous apparition threw him into convulsions. The fish employed on this occasion was a mackarel.

In burial grounds, luminous appearances have often been seen, and fearful and awful are they to the eye of superstition. These appearances are clearly traceable to the same source, and take place during the earlier stages of disintegration. From this phenomenon, Moore, in one of his exquisite lyric gems, has derived a beautiful and highly poetical simile:—

> 'Thy midnight cup is pledged to slaves,
> No genial ties unwreath it;
> The smiling there, like light on graves,
> Has rank, cold hearts beneath it.'

In 'Earl Richard,' an ancient ballad published in Sir Walter Scott's 'Minstrelsy of the Scottish Border,' these lines occur:—

> 'And where that sackless knight lies slain,
> The candles will burn bright.'

Sir Walter Scott adds in a note, 'These are corpse-lights, called in Wales canhwyllan cyrph, which are seen to illuminate a spot where a dead body is concealed. Some years ago, the corpse of a man drowned in the Ettrick, was discovered by means of these candles. Rustic superstition derives them from supernatural agency, and supposes that as soon as life has departed, a pale flame appears at the window of the house in which the person has died, and glides towards the churchyard, tracing through every winding the route of the future funeral, and pausing where the bier is to rest. This and other opinions, relating to the 'tomb-fires' livid gleam,' seem to be of Runic extraction, having, like many fabulous tales, some foundation in fact.'

A very curious, though not a very pleasing phenomenon of the same kind, and arising from the same causes, has been observed by many in dissecting rooms. It has been described by my friend Dr. Hart, who favored me with the following statement:—'Having had occasion to enter the dissecting-room of the Park-street School of Medicine on a dark, damp night in 1827, my attention was attracted by a remarkably luminous appearance of the subjects on the tables, similar to that which fishes and other marine animals exhibit in the dark. The degree of illumination was sufficient to render the forms of the bodies, as well as those of muscles and other dissected parts, almost as distinct as in the daylight. This luminosity was communicated to my fingers from contact with the dead bodies, from any part of which it could be removed by scraping it, or wiping it with a towel. I observed that the surfaces of the dissected muscles were brighter than any other parts. Although I have repeatedly visited the dissecting-room since, at all hours of the night, and at all seasons of the year, I have never since been able to discover a similar luminous appearance.'

This phenomenon has been observed by Drs. Harrison, Jacob, and Houston.

In the 34th vol. of the 'Cabinet Cyclopædia,' Mr. Donovan, under the head of putrefactive fermentation, mentions a singular case which occurred at the Richmond Hospital School of Medicine, in the year 1828. 'The body of a girl, about 13 years of age, was laid on the dissecting table; there was nothing remarkable in its condition: it was summer. In some days a white smoke began to exhale, which increased for two days, and then became very dense. There was no more fœtor at first than in ordinary cases, but at length a smell so intolerable arose, that it was necessary to remove the body to the vault. I occasionally watched it, but nothing further occurred; the smoke in a few days more ceased. There was no heat developed that I could perceive.'

It is not improbable that the dense white vapor, seen in this case during the day, would have proved luminous in the dark; no remark, however, was made of its appearance by night

The prosecution of our subject leads us forward to a brief consideration of the evolution of light, as a function in living vegetables and living animals. From observations which have been made, we are led to believe that the flowers of several plants, in serene and warm summer evenings, disengage light and emit sparks. It is said to have been observed in the nasturtium, the marigold, the Indian pink, and other flowers; also in some chryptogamic plants adhering to old wood and growing in mines. The more warm and moist the locality, the clearer, it is said, is the light emitted.

Several species of lichens, especially subcorticalis, subterranea, and phosphorea, are occasionally phosphorescent, and more or less luminous in the dark; and hence they often give to the cellars and mines, in which they grow, an extraordinary and brilliant appearance. In the coal mines in the vicinity of Dresden, they are said to be so abundant and so luminous, as even to dazzle the eye by the brilliant light that they afford. This light is increased, by the warmth of the mines, so that, hanging in festoons and pendents from the roof of the various excavations, twisting round the pillars, and covering the walls, they are said, by their brightness, to give to the Dresden coal mines, in which they abound, the semblance of an enchanted palace. Mr. Erdman, the commissioner of mines, thus describes the appearance of the rhizomorphæ in one he visited: 'I saw the luminous plants here in wonderful beauty; the impression produced by the spectacle I shall never forget. It appeared, on descending into the mine, as if we were entering an enchanted castle. The abundance of these plants was so great, that the roof, and the walls, and the pillars, were entirely covered with them, and the beautiful light they cast around almost dazzled the eye. The light they give out is like faint moonshine, so that two persons near each other can readily distinguish their bodies. The lights appear to be most considerable when the temperature of the mines is comparatively high.* It is asserted that the dictamnus albus, in peculiar states of the weather, diffuses around itself an atmosphere, which, by contact with the flame of a candle, ignites and emits a brilliant blue flame. On this part of our subject, however, observations have been so few that we dare not speculate upon them, or make them the ground work of any attempt at explanation; and yet it is a subject of considerable interest—one which merits a more minute and extended investigation, and which is immediately connected with the general subject of phosphorescence in animated nature.

This property of becoming luminous during life, independently of reflected light, is possessed by certain genera of several classes of the animal kingdom; but it is amongst the almost infinitely varying and often shapeless forms which inhabit the ocean that we shall find the most beautiful and wonderful exhibitions of phosphorescent lights and illuminations.

The animals which most distinctly and constantly manifest this curious function are some infusoria, zoophyta, acalephæ, echinodermata, annelida, myriapoda, insecta, crustacea, and mollusca.* To give a detailed description of each species is neither my object nor intention; I shall merely select a few of such instances as display most remarkably the characters and properties of animal light.

Several species of infusoria belonging to the genera cercaria, volvox, vibrio, trichoda, and lincophœa, are said to be luminous; in this country I believe it has not been generally observed that fresh water infusoria possess this property. To Sir Philip Crampton I am indebted for the following corroboration of this fact. He observed a luminous appearance, similar to that exhibited in the ocean, in the waters of a mountain lake, which has given name to his residence, Lough Bray; the surface of a piece of muslin, through which some of the water had been strained, presented a luminous appearance; thus proving that in fresh water, as well as in the sea, luminous animalculæ exist.

Among the floating polypi, (the polypi natantes of Lamarck,) the pennatula or sea-pen is most remarkable; it derives its name from its singular resemblance to a quill with its plumes. It is a phosphoric animal, and emits a light so brilliant, that by it the fishermen are reported to see fishes swimming near it. Several species of the pennatula are phosphorescent.

The acalephæ furnish us with a numerous catalogue of luminous animals; almost every species of medusa, beroe, physalia, rizophora, stephanomia, and physophora, enjoy this function. Of these, Dr. Macartney, in his interesting memoir read at the Royal Society, has described and given drawings of three species discovered by him on our own shores—beroe, medusa hemispherica, and m. scintillans; it is, to this last almost microscopic animal that he chiefly attributes the diffused phosphorescence of the ocean. One of the largest and most splendid of the luminous creatures of the deep is the medusa pellucens, discovered and described by Sir Joseph Banks; it measures six inches across the crown or umbella, the central parts are opaque, and it emits vivid flashes of light during its contractions.

Few instances of animal luminousness are met with among the echinodermata; a species of asterias, ophiura telactes, and phosphorea, are, however, described as possessing this property.† Several species of nereis, as n. phosphorans, noctiluca, cirrigera, mucronata, and planaria retusa, with other annelidans, evolve light.

Among the crustacea we find cyclops brevicornis, grammarus pulex, scyllarus,(?) and cancer fulgens, &c. In a species of cancer seen by Smith in the Gulf of Guinea, the light (which seemed to him to be emitted by the brain) was of a deep blue color when the animal was at rest; but when it moved, bright corruscations of silvery light were darted from it in all directions.

Various observers have included the salpæ among phosphoric animals; of these salpa confederata (one of the tunicaries of Lamarck) dwells in the ocean at a great distance from land. Several individuals are attached by their sides to each other in rows; during the day they appear like white ribands, and during the night like ribands of fire, which alternately roll up and unfold themselves, either from the motion of the water or from the will of the animals that compose them.

The pyrosoma atlanticum, mediterraneum, and gigantium, are brilliantly luminous; their dimensions vary from five to fourteen inches in length. The external surface of the p. atlanticum is studded with thick elongated tubercles, which shine like polished diamonds; as it descends below the surface it is described as presenting the appearance of a moving ball of fire. Its hues are ever varying, and when in motion it shines most brilliantly.

---

* Burnett's Outlines of Botany.

* Cyclop. Anat. and Phys., Art. Animal Luminousness.

† Ibid.

The pholas, or stone-borer, is remarkable for its luminous property, which was noticed by Pliny, who observes, 'that it shines in the mouth of the person who eats it; if it touch his hands or his clothes, it makes them luminous, and that its light depends upon its moisture.'

M. Reaumur states that it is more luminous in proportion to its being fresh; and that when dried its light will revive if it be moistened either with fresh or salt water; but that brandy immediately extinguishes it. He endeavored to make this light permanent, but none of his schemes succeeded. Beccarius, who tried numerous experiments on the pholas, found that of all the liquors into which he put the pholades, milk was rendered the most luminous. A single pholas made seven ounces of milk so luminous, that the faces of persons might be distinguished by it. He also states that when the animal is preserved in honey, the property of becoming luminous would continue longer than a year, and then it would, when plunged in warm water, give as much light as ever.

Several naturalists have given accounts of certain fishes having been seen to give out light, while alive, in their native element; among others, Mr. Bennett, in a paper read at the Zoological Society, has described some fishes, recently discovered, to be luminous.

Herrings, it is stated, as they move in shoals of myriads through the waters, throw off a kind of slimy secretion, which extends over their columns, and is easily seen in calm weather; this substance, in gloomy still nights, exhibits a phosphoric light, as if a cloth faintly luminous was spread over the sea. We may here just advert to the fact, that Fourcroy and Vauquelin, in analysing the milt of the carp, found phosphorus in such quantity as to give a bright light in the dark. Sharks have been reported as luminous, and Dr. M'Culloch enumerates also the pollock, the pilchard, the sardine, the whiting, the mackarel, and the gar, as being sometimes accompanied by phosphoric lights.

This property of evolving light seems to reside either in a fluid secreted by a vital process, and generally diffused over the surface of the animal; or it is confined to a particular and especial organ destined to perform this function. In the acalephæ it is asserted that the exudation, which is luminous, is that which possesses the stinging property from which these animals derive their name. In some animals the light appears to be increased or diminished by muscular motion, and is probably not wholly independent of the will of the animal.

MM. Quoy and Graimard state that, in handling luminous marine animals while alive, they have been sensible of an odor proceeding from them similar to that which is perceived around a highly charged electrical apparatus.* The various marine animals above alluded to, as evolving light from their living bodies, together with perhaps many yet undiscovered species possessing the same property, are now believed to be the *chief* source of that beautiful and remarkable phenomenon, the luminousness of the sea. Of these creatures, some, as certain medusæ, are so extremely minute as to require the aid of a powerful lens to prove that, minute as they are, they still possess the characters of organized beings, and are capable of active voluntary motion. The water of the sea is sometimes so densely crowded with these small animals that, when passed from one vessel to another, a stream of flowing light is seen; by adhering to the fishermen's nets, they occasionally give them a very curious and beautiful appearance; when slowly raised from the sea, in the dimness of twilight, the nets present a luminous outline; each of the meshes is bounded with a line of light, and the whole looks like a fairy scene.

For miles around, these little animals sometimes give to the sea the aspect of a vast surface of snow, and produce on the ocean's face a new milky-way. This appearance of the sea, produced when luminous animals are crowded on the surface, has more than once terrified the inexperienced navigator of intertropical seas. The oceanic illumination is exhibited in two distinct forms, either that of a diffused sheet of light expanded on the surface of the ocean, or the waves appear to sparkle with intermitting and often vivid scintillations. The scintillations are observed most distinctly when the crests of the waves are broken by the wind, or by the transit of a ship, and are much more brilliant on some nights than on others. Lord Byron gives a beautiful description of this phenomenon in the 'Corsair,' a description evidently derived from personal observation.

> 'Flashed the dipt oar, and sparkling with the stroke,
> Around the waves phosphoric brightness broke.'

In a note it is observed, 'By night every stroke of the oar, every motion of the ship or boat, is followed by a slight flash, like sheet lightning, from the water.' This phosphorescence has likewise been observed to follow the course of sea currents, and it has been noticed that when the sea is most brilliantly illuminated, small fish abound, and are taken in great numbers.

Sometimes, when heavy tropical showers of rain descend at night, the sea is suddenly kindled up, and as suddenly the light is extinguished. These sudden alternations of light and darkness are described as being remarkably beautiful.

Many years since I had one, and but one, opportunity of witnessing, on the bold and romantic western shores of Ireland, the oceanic phosphorescence displayed with peculiar splendor and effect. The huge waves of the Atlantic were rolling magnificently, and in slow succession, on the pebbled beach of a deeply indented bay, involved in lofty cliffs and sea-worn caverns; it was on a still night, preceded by a day of storms. The boundary of the waves, as they advanced and retreated on the shore, was marked by a broad and brilliant fringe of silvery light, the waves themselves tipped at intervals with a restless, and ever-flitting, and beautiful phosphorescence. There was just sufficient starlight to give a dim view of the lofty cliffs on either side of the bay, against which the waves were beating with incessant roll. The effect of the whole was inexpressibly grand. Next morning the sea was found so densely crowded with what the fishermen called jelly-fish, that it was difficult to propel a boat through the water, and swimming, which I vainly attempted, was rendered impracticable.

Dr. Macartney, in his 'Observations on Luminous Animals,' gives the following interesting account of the illumination of the sea:—'I have had two opportunities of seeing an extended illumination of the sea. The first night I saw this singular phenomenon was extremely dark; many of the medusa scintillans and medusa hemispherica had been observed at low water, but on the return of the tide they had suddenly disappeared. On looking towards the sea I was astonished to see a flash of light, of about six yards broad, extend from the shore for apparently the distance of a mile and a half along the surface of the water. The second time that I saw this sort of light proceed from the sea, it did not take the same form, but was diffused over the surface of the waves next the shore, and it was so strong that I could for the moment distinctly see my servant who stood at a little distance from me; he also perceived it, and called out to me at the same instant. On both these occasions the flash was visible for about four or five seconds.'

An extraordinary series of phenomena connected with a particular display of the luminousness of the sea, is reported by Mr. Henderson* as having occurred in the Atlantic on the 5th of March, 1824. About 9 P. M., the sea appeared unusually luminous. Every person who kept his eye fixed upon it for but a short time was immediately affected with giddiness, headache, pain in the eyeballs, and slight sickness. Although these symptoms ~~varied~~ in intensity amongst the spectators, yet there was not one on board who did not feel some degree of them, and all imputed them to the effect of the light proceeding from the surface of the ocean. Mr. Henderson remarks, 'For my own part, the headache, &c., which followed immediately my looking at the water, was particularly severe, nor did it go off until morning. The effects I experienced were like those produced by smoking too much tobacco.*

---

* Cyclop. Anat. and Phys., Art. Animal Luminousness.

* Cyclop. Anat. and Phys., Art. Animal Luminousness.

[*Remainder in our next number.*]

GLEANINGS FROM THE FOREIGN JOURNALS.

Symblepharon.

M. Pétrequin, of Lyons, the senior surgeon to the hospital, has performed a somewhat novel operation for the cure of this species of deformity, the result apparently, in the case recorded, of repeated operations for pterygium. A gentleman of Clermont, Savoy, was affected with pterygia in each eye, caused by chronic engorgement. In 1834, Mayor, of Geneva, operated on him, and the left eye was perfectly cured; the pterygium in the right, on the contrary, returned at the end of a month, and was attended with pain and some difficulty in the motions of the eye. The second time he was operated on by M. Maunoir, but with temporary success. The pterygium returned, and increased rapidly. Riberi, of Turin, who was next consulted, excised a portion of the caruncle with the pterygium, and applied caustic afterwards. This time fibrous bands formed, causing adhesion of the eyelids to the globe of the eye. These bands were excised by a physician at Chambéry, the operation heing followed hy large granulations, which were extirpated again and again, and finally repressed by the application of the sulphate of copper and nitrate of silver. Cicatrisation took place gradually, but at the same time there formed a mass of fihrous bands, disposed fan-shape, the base attached to the internal surface of the two eyelids, the apex extending to and terminating on the cornea, which it partially covered to the extent of two lines (1-6th of an inch.) M. Pétrequin saw the patient in this state on the 10th of April, 1841, and on examination found the eyelids bound together and to the eye, by a multitude of dense, fibrous hands, which rendered their motion very difficult. When the patient looked outwards to the right he had double vision, as also, but in a less degree, when he looked much to the left. Cold, exposure to the air, reading, and writing were painful and fatiguing. He could not turu the eye outwards.

This case was not unattended with difficulty, in consequence of the great tendency to relapse aud to an increase of the disease. Excision, incision, and the application of caustic, had already failed; a new operation was therefore requisite, which was performed in the following manner on the 13th:—A small curved needle, armed with a double thread, was passed between four or five of the fibrous bands of the lower eyelid and the globe of the eye, and the threads tied, the inner ligature being tied somewhat loosely. The operation was repeated the next day, the ligatures being placed external to those already applied. The eye was kept immovable, and bathed with cold water and laudanum. On the 15th the adhesions of the corneal side were broken; the part was touched with caustic alum, and a little charpie passed behind. The sulphate of copper was applied lightly the four following days; the other ligatures separated later; the lower eyelid was set at liberty, and became free and mobile, and a cure was effected. A similar operation was afterwards performed on the bands of the upper eyelid, but the results were not so successful. It was followed by a high degree of inflammation, requiring the application of leeches, mustard pediluvia, purgatives, &c., and when the patient left Lyons the eyelid was only partially freed, but its motions were more easy. M. Pétrequin heard from him six months afterwards, and he was doing well. A few months later he was informed indirectly that the improvement the patient had experienced had not continued entirely. A second case, of an equally interesting nature, is recorded by M. Pétrequin, in which the adhesion of the eyelids to the eye had been caused by the application of quicklime. The patient was a young blacksmith, and had heen operated on seven times unsuccessfully previously to his placing himself under the care of M. Pétrequin. The adhesion affected the lower eyelid chiefly at the external canthus, but the commissure was also engaged; the motions of the eye were difficult and painful, and there was present a degree of strabismus convergens, with diplopia, imperfect vision, &c. The ligatures were applied four or five times, each successive application being followed by apparent improvement. The first was applied on the 11th of July, and when the patient left the hospital on the 30th the adhesions were entirely destroyed, and vision perfect, but cicatrisation was not quite completed. The patient was to return in September, if any contraction or difficulty of motion appeared afterwards, and, as he had not done so, M. Pétrequin concludes him cured.

The object of M. Pétrequin in applying a double ligature to these bands, tying one tightly, and the other more loosely, was, that the separation of the threads should take place at different times, so that the wound caused hy the ligature tightly applied might be healed, or nearly so, before that to be produced by the more loose one, should be actually open, thus inducing cicatrisation of each separately, aud thereby preventing their re-union. The portion of the fibrous band between the two ligatures could not form adhesions to either wound, inasmuch as it was in a state of strangulation, and must necessarily fall atrophied. The more dense and fibrous the bands, the more easy is it to cause a difference of several days between the situation of the respective ligatures, attention being paid to their heing tied in different degrees of constriction. If the bands are very thick, the ligatures must be applied again and again, the needle heing passed each time deeper and deeper. After the operation, it is requisite to keep the eye perfectly motionless and closed, to prevent those motions which might cause traction on the eye, and separate the ligature sooner than was intended.—*Gazette Médicale.*

Contusions of the Breast.

When a contusion of the breast has taken place, and its usual consequences have followed, every one knows it is requisite to have recourse to antiphlogistics and emollients; but, when the more marked symptoms have been removed, nothing more is done. Nevertheless, pain is still felt, either constantly, or only at the period of the catamenia, disappearing in their absence. It may be that, instead of pain, there is increased sensibility of the part contused, evident on the slightest pressure, and yet no enlargement can be detected on examination. Nevertheless, in every case enlargement will ultimately take place, especially if the abnormal state of the breast be not removed before the critical time of life. In ninety-nine cases out of a hundred patients, with tumors of the breast, will assign to their disease the origin and progress just described. It is, therefore, of the utmost importance to attend seriously to this state of pain or increased sensibility in a limited part of the breast, occurring after contusion, or when experienced without the patient being able to call to mind the occurrence of any previous injury. When all traces of the contusion have been removed by antiphlogistic and emollient treatment, if either pain or sensibility continue, the treatment must be persisted in; leeches must be applied if requisite, and anodyne and emollient poultices or liniments had recourse to. Rice poultice, moistened with the vinum opii, is Lisfranc's favorite emollient; but the skin of many women takes on erysipelatous inflammation when it is used, and in such cases he advises an application of oil of hyoscyamus, anodyne balsam, and vinum opii, pieces of linen steeped in this being applied to the breast, the dress being guarded by the interposition of dry linen compresses. When the poultice is used, it should be covered with a piece of waxed cloth, to prevent its getting cold too soon. When leeches are used, they should be applied around or below the gland, not on it. Every source of pressure or irritation of the gland must at the same time be strictly avoided.—*Jour. de Med.*

---

* Trans. Med. and Phys. Soc. of Calcutta, I., 107.

Hydrencephalocele.

An interesting case of this rare malformation has been placed on record by Mr. Lyon, one of the surgeons to the Glasgow Royal Infirmary, in a communication published in the 'London and Edinburgh Monthly Medical Journal,' to which some valuable remarks are attached. A child was born in the year 1841, having tumors on either side of the upper part of the nose, of a glossy, spotted appearance, with numerous small vessels ramifying on the surface. They presented a spongy feel, were diminished by direct pressure, but not by compression of the great arterial vessels. Respiration through the nose perfect, and the palate entire. When the finger was pressed on the tumors, there was an indistinct feeling as if it had entered some cavity. A consultation took place at the infirmary as to the nature of the case: they were at first deemed to be *nævi materni*, from their glossy appearance, vascularity, diminishing under pressure, and resuming their former size when the pressure was removed, their deep red color, distinct pulsation, and tension while the child was crying. This opinion was abandoned when the tumors were found to be transparent by transmitted light. Then again it was surmised that they were cysts springing from the bones of the face or jaw, connected with the antrum, or else enlarged lachrymal sacs. Their recession and resiliency during and after pressure, their color, pulsation, &c., controverted the former of these positions, and, together with their situation, showed the second to be erroneous also; while their contents not escaping from the puncta or nostrils during compression, proved they were not caused by dilatation of the lachrymal sacs. The surgeon to whom was due the discovery of their translucency, stated his belief that they were connected with the brain and contained fluid, supplied from between the membranes, the tumors being in his opinion analogous to spina bifida, an hypothesis explaining all the appearances detailed.

The result of this consultation was that one of the tumors should be punctured, an operation that was performed on the one on the right side, when about a drachm of limpid fluid was discharged slowly, and partly from the effect of pressure, which, when exerted on the left side, caused the serum to flow more rapidly, leading to the conclusion that a communication existed between them. The little patient died eight days afterwards, and, on examination of the body, there was found a deficiency of the anterior part of the roof of the ethmoid cells, and of a small portion of the internal angle of the orbitar plate of the frontal bone, through which the tumors, consisting of the membranes of the brain and a part of the anterior cornua of the lateral ventricles, protruded. There was not any osseous partition between the cysts and eyeballs, the ossa plana being wanting. The antra were not involved in the malformation. The ventricles contained about two ounces of serum, and there was effusion of sero-purulent fluid between the dura mater and the arachnoid, and plastic lymph on each of the membranes.

The results of the sectio cadaveris have confirmed Mr. Lyon in his belief that the case was one of hydrencephalocele; and he states his opinion that this malformation, spina bifida, and chronic hydrencephalus, are only three varieties of the same morbid condition, the only difference being one of extent between the first and third, and of locality between them and the second. In this view he holds the treatment adopted to have been incorrectly applied, and thinks puncture of such malformations to be pregnant with highly dangerous consequences. The same treatment is applicable to hydrencephalocele as to spina bifida; and Mr. Lyon alludes to several cases, where persons have reached maturity, notwithstanding the existence of a large spina bifida, and especially to one where a spontaneous cure was effected.

The similarity between hydrencephalocele and spina bifida, he says, is still closer, if we allow the correctness of the idea, maintained by many anatomists, that the bones of the cranium are only the more complete development of the rudimentary parts existing in the vertebræ. In any view of this matter, the similarity of the contents of the skull and spinal canal in organization, and partially in their functions, the identity of their membranous coverings, and the sameness of their pathological states in the diseases enumerated, authorise us to consider the treatment applicable to one of them as equally proper for the others. This treatment, in Mr. Lyon's opinion, is graduated and equal pressure, applied not merely to the protrusion, but over the whole head, as he believes the tumor to be merely indicative of chronic hydrencephalus.

The Causes of Metallic Tinkling.

Laennec, whose talent for observation exceeded his powers of explanation, gave a very vague theory of the cause of metallic tinkling. Dance attributed it to the breaking of the bubbles of air on the surface of the liquid in the pleural cavity. M. Beau adopted this explanation, and sought to render it complete by adding the cases in which the fistula, not opening below the level of the liquid, traverses a collection of purulent matter; and finally, M. Raciborski explains metallic tinkling by the vibrations of the effused fluid, caused by the motions of respiration, the cough, and the voice. M. de Castelnau, availing himself of the arguments used by Messrs. Barthe and Rogers, in their Manual of Auscultation, has easily demonstrated the insufficiency of each of these theories taken separately. In fact, the theory of Messrs. Dance and Beau falls at once before the well-ascertained fact, that the tinkling has been observed in cases where the fistula opened above the level of the liquid; on the other hand, besides the difficulty of understanding the theory of Raciborski, if it were founded in truth, the metallic tinkling, as de Castelnau observes, ought to be present also in pneumo-hydro-thorax without communication, which does not occur, in at least the great majority of cases. M. de Castelnau considers the metallic tinkling to be nothing else than a mucous or cavernous rale resounding in a capacious cavity, by means of a communication established between it and the bronchia—that is to say, an amphoric rale. The presence of a liquid, he adds, is not necessary for its appearance. He supports his theory by experiments and clinical observations.

An elastic gum catheter, containing a few drops of water, or mucilage, to moisten its parietes, was affixed to a syringe, the piston of which was set in action; a species of rale, closely resembling the mucous rale, was then heard. The end of the catheter was next introduced into a vessel of a certain size—a bottle or pitcher, for example—and the rale was immediately changed into a genuine metallic tinkling, which was heard equally well when the bottle was empty, as when it contained fluid. This experiment was repeated on the dead body, and the same results were obtained. The clinical facts are four in number, and three of these, at least, prove that metallic tinkling can exist without the air being obliged to traverse a liquid in the pleural cavity.—*Examinateur Méd.*

Phthisis.

Of ninety-eight patients who have been, or are, under my care since the beginning of October, no fewer than twenty-eight (which is one in three and a half) have presented signs of tubercles in the lungs. Of this number, thirteen were cases either of latent phthisis, or of pulmonary tubercles disguised by other diseases, and which, but for their physical signs, we should not pronounce (perhaps not even suspect) to be tuberculous at all. I am convinced, from extensive observations and much reflection on this subject, that tuberculous disease of the lungs, in some degree of form or another, prevails among the more seriously sick in London, and in other large towns, in as great proportion as among our own patients (above stated.) So far as our post-mortem examinations have given the opportunity, you have seen verified the statement which you have often heard me make—that of those in large towns, who die of various diseases or accidents, above the age of thirty, more than half exhibit in the lungs more or less of tuberculous disease, or of the traces which it leaves behind. It is thus only we can learn the real amount and importance that tuberculous disease bears in the scale of maladies, by regarding it not only in its more acknowledged forms, and attended by its common symptoms, but by aid of careful physical diagnosis, or of the still more minute search of the scalpel, tracing it in all its degrees and combinations, as a secondary lesion and as a primary affection, as an index of the state of the constitution, as well as in the more decided form of an extensive organic disease.—*Dr. C. J. B. Williams, in London Medical Gazette.*

Inflammation of the Cœcum--Accumulation of Fæces.

Dr. Gerbaud has published several cases of inflammation of the cœcum, caused by the accumulation and induration of fæcal matter in the intestines. In one of these cases the diagnosis was verified by the autopsy; the cœcum was found to be the only part inflamed, and its mucous membrane thickened, softened, and ulcerated. Inflammation of the cœcum comes on suddenly, and the seat and intensity of the pain aid the diagnosis materially. The symptoms resemble those of hernia, local peritonitis, and acute cystitis, but its situation and progress will distinguish it from those affections. A long circumscribed tumor in the situation of the cœcum is found in those cases where the inflammation is caused by the fæcal accumulation, and is not unfrequently mistaken for other diseases. Lisfranc was sent for, fifteen years ago, to a patient who was said to have a fibrous tumor in the rectum. She was suffering from diarrhœa, and no one suspected the accumulation of fæces in the intestine. She was paraplegic, and the orifice of the rectum being very dilatable, a tumor, covered with a reddish pellicle, could be easily distinguished. On examination, and scratching this with the nail, Lisfranc discovered, to his surprise, that it consisted of a fæcal mass enveloped in false membranes. It was extracted, but not without difficulty.

Retention of stercoral matter in the lower portion of the intestinal tube, as high up as the sigmoid flexure, is of more frequent occurrence than is supposed. Authors advise the extraction of these matters with a curette, when they are within reach, but Lisfranc considers that dangerous consequences might arise from such a proceeding. He recommends, in preference, breaking them up with the index finger, and washing them out with injections; this, however, is not always an easy operation, on account of their being situated in a distant part of the intestine.—*Lond. and Edin. Med. Jour.*

Hyeres.

Dr. Barthe states, that a residence at the beautiful and healthy village of Hyeres is of service in cases of chronic pulmonary catarrh, asthma, emphysema of the lungs, phthisis, and chronic affections of the larynx. The diseases of the circulatory system may be advantageously influenced secondarily through the medium of the respiratory apparatus. Rheumatic subjects will also derive benefit from a warm atmosphere so little subject to thermometrical and hygrometrical changes. Affections of the mucous membrane and of the nervous system derive but little relief from the climate of Hyeres, which is far more useful in cases of general debility and in scrofula.

Scarcely five and twenty years since, immense marshes covered the southern part of the plain, and gave rise to intermittent fevers by their emanations; but in 1820, M. Louis Arran undertook to dry up these marshes, by turning the course of the river Roubaud, in which he succeeded with the aid of M. de Ivernois, of Geneva. Intermittents are now almost unknown.—*Arch. Gén. de Méd.*

Parasites in Aphthæ.

Dr. Vogel, of Munich, has observed vegetable parasites on the mucous membrane of the mouth and œsophagus of an infant a fortnight old, which died of aphthæ extending from the mouth to the cardia. These aphthæ, examined under a glass magnifying two hundred and twenty times, presented the appearance of genuine confervæ, similar to those found by Schonlein in impetigo. Some of these parasites were of a round shape, some with, some without, a central nucleus; some isolated, others grouped together; others again consisted of scattered filaments, swollen at certain points, sometimes in the middle, at others at the extremities. All of them were colorless, and unaffected by water, ammonia, or acetic acid.—*Gaz. de Med.*

Adulteration of Medicinal Plants.

The roots of gentian are sometimes mixed with those of belladonna and aconite, sarsaparilla with the roots of asparagus, the carex arenaria, and the stems of the hop. Among the roots of serpentaria we sometimes find those of aristolochia tomentosa, and spigelia marilandica. The rhizomes of bistort are often mistaken for those of tormentil—an error, however, of little consequence. The bark of canella alba is substituted daily for that of wintera aromatica, which belongs to a distinct natural order, and possesses different medicinal properties. The leaves of conium are confounded with those of arethusa cynapium, cicuta virosa, myrhis temulenta, and several others. Few specimens of fox-glove leaves, procured from the ordinary herb collectors, are free from leaves of verbascum, comfrey, or symphytum officinale. Among the leaflets of senna are found the leaves of arguel, cynanchum oleafolium, the leaflets of tephrosia apollinea, and coriaria myrtifolia; while the folia uvæ ursi are mixed with those of cow-berry, the vaccinium, vitin idæa. The flowers of the matricaria chamomilla and the pyrethrum parthenium are mixed with, and substituted for, those of the true chamomile, the anthemis mobilis. The stigmas of saffron are adulterated with the florets of the marigold, and the pimento is said sometimes to be mixed with cocculus indicus; but should this be the case, the latter is easily distinguished from pimento by the absence of the persistent calyx, as well as the bitterness and the want of aroma.—*Pharmaceutical Transactions.*

Double Uterus.

M. Dumas has collected the details of several cases of double uterus, from which he draws the following conclusions:—First, the menstrual secretion may take place from one part of the bifid uterus, it being unimpregnated, while the other side is occupied by an embryo. The woman may be pregnant in the right uterus, and virgin in the left, or vice versâ; and again, she may be in labor on one side and pregnant on the other. Superfetation may take place not only when each side of the double uterus has a neck and os tincæ, but when both sides of the bifid organ terminate in one neck and orifice; and notwithstanding the absence of anatomical proof, still this ought to be admitted as a fact in forensic medicine. Although it is impossible to say that each side of a double uterus cannot enlarge sufficiently to carry a fœtus to the full term, yet it is reasonable to expect abortion to be frequent. The existence of a double uterus will render labor more laborious, as also the delivery of the placenta, and increase the danger of laceration. The two sides of the bifid organ do not exert reciprocal influence.—*Journal de la Société de Médicine Pratique de Montpellier.*

Erysipelas.

Considered in a surgical point of view, erysipelas depends more as regards its predisposing cause on external, atmospheric, or meteorological inflammations, than on the state of the general health or constitution of the patient. Its determining or occasional cause is almost always a wound or irritation of some part of the skin, the efficient cause being generally some matter coming from without or from disorganized tissues, and mixing either primarily or secondarily with the fluids of the diseased part. The fluids thus changed produce two orders of morbid phenomena, those indicative of general disorder, and local disease. An isolated spot of erysipelas is generally removed in from four to six or eight days, but as the entire inflammation is composed of a number of successive erysipelatous spots, its duration varies in proportion to their number.

With regard to the treatment, Velpeau has kept notes of 400 cases treated by different plans. Of these, 25 were subjected to compression; 33 to the successive application of blisters, either upon the immediate seat of the inflammation, or around it; 30 were treated by the nitrate of silver, either in substance or solution, sometimes applied on the surface, sometimes around it. In two cases the actual cautery was used, and in all these the remedies were without satisfactory result. The Neapolitan ointment was tried in 200 cases, and was found to shorten the duration of the complaint a day or two, and perhaps to render it rather less painful; but its application is repugnant to the patient, gives rise to salivation, and spoils the linen. 23 cases were treated with purified fresh lard, which was less efficacious than the mercurial ointment; 12 by the white precipitate ointment, which increased the disease; 10 by very diluted sulphuric acid; 6 by citric acid, tartaric acid, oxicrat, and salt water; 6 by the acid nitrate of mercury, used as a lotion in three cases, and in the others as a slight caustic around the circumference of the inflammation, but all unavailingly. The application of camphor, and puncturing the part were equally useless.

Velpeau, from the experience gained in the treatment of 40 cases, recommends the sulphate of iron, which, he says, has really arrested the progress of the disease in the majority of cases. He employs it in solution in the dose of thirty scruples to a quart of water, and in ointment, containing eight scruples of the chalybeate to thirty of lard. The ointment is not so useful an application as the solution, but it is more convenient when large surfaces on the body, neck, or head, require its use. The entire surface of the inflamed part and a little beyond it, should be anointed with it three times a day. The solution is employed in lotions, compresses wetted with it, being applied every six hours, so as to keep the part constantly moistened.—*Velpeau, Annales de Chirurgie.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, December 10, 1842.

One of the most astounding facts connected with the state of medical education in this city, has lately been communicated to us. It appears that there are now in attendance at the College of Physicians and Surgeons and the Stuyvesant Institute, upwards of three hundred and fifty students,—of this comparatively large number, *just* EIGHT *gentlemen had taken the hospital ticket* on the twenty-fifth of last month! Does not this speak volumes on the miserably inefficient course of instruction to which students of medicine are subjected? Why, it is almost incredible. But it is too true. And this has been the case year after year.

The reflections which are necessarily excited by such a melancholy fact are most painful. Out of every hundred medical students educated in New York, not three attend an hospital! And yet who has not heard of the extravagant statements so gravely and pompously put forth in our College Circulars respecting the 'immense' facilities of receiving clinical instruction which students enjoy in New York? We know of no language sufficiently strong to characterize as it deserves the disgraceful conduct of the professors who discover such total disregard of the interests of their students and the reputation of the profession. Is it any wonder that such gross quackery pervades the ranks of the 'regular practitioners' of this country? When such swarms of *such* young physicians are every year sent forth, can it be esteemed less than a miracle when their patients recover?

Only think of a student coming raw from the country, destitute even of a decent English education, as the majority of our medical students are, as innocent of Latin as a sucking-dove, and utterly unacquainted with medical science, and then after merely running the round of half-a-dozen classes for six or eight months, without ever seeing a single case, or witnessing a single *post-mortem* examination, receiving the degree of M. D., and returning home or setting out on his travels, fully empowered to carry out the work of destruction, *secundum artem!* And it has been for denouncing such a system as this, that a pack of mercenary greedy adventurers, have had the consummate impudence to assail us with all the venom and malignity of their natures. But we cannot present any more satisfactory commentary on our articles relative to the gross defects of the present system of medical education here, than the solitary fact which furnishes the subject of the present remarks. We ask the parents and guardians of these students, what do you think of the men to whom you have entrusted the education of your youth, and who discover so little anxiety to direct them to the proper means of acquiring a respectable knowledge of their profession ?

Both schools are equally the subject of reproof in this matter. Their conduct is utterly shameless and inexcusable. Why have they not made attendance on the hospital imperative ? If the pockets of the professors could have 'realized' any thing by the passage and enforcement of such a law, it would, of course, long since have been in operation. But even although they did not obtain any pecuniary benefit, surely they might have some bowels of compassion for the unfortunate young men committed to their charge. We will return to this subject, and in order that the public may duly estimate the character of the system of education adopted in this city, we will omit no opportunity of publishing the fact, that out of three hundred and fifty students attending the medical schools of New York, EIGHT attend the hospital!

We have been gratified in finding that Dr. LINTON, Professor of Obstetrics in the Medical Department of the St. Louis University, took up the important subject of 'Medical Reform' in his introductory lecture delivered at the commencement of the present session. Dr. LINTON stated that he does not despair of being able to effect a reformation. His views on the subject, he remarked, were not of recent adoption or *new*, but *old* and long tried. His remedy for existing evils is the creation of a board of medical examiners unconnected with medical schools, whose duty it should be to examine every candidate for a medical degree, who may present himself, without regard to his antecedent course of studies; the only requisite being adequate knowledge, of which a higher standard is to be exacted by the board than is required, at present, by the faculties of colleges. This, Dr. LINTON very justly contends, will throw, in part, the business of medical teaching into the hands of private practitioners and associations of medical men, and thus give to the whole profession those motives for exertion, which are at present confined to professors in medical schools. Would these associations compete with medical schools ? He thinks they would, and that the rivalry thus excited between them would elevate the character of the profession. The latter teach great numbers, whereas the former are confined to a few; and every one knows the advantages of private instruction.

The Doctor cited the example of Paris, where, although public instruction is excellent and gratuitous, students prefer resorting to private courses, for which a fee is required. In these latter courses the students *feel* and *see*, whereas in the former they only hear.

We cordially unite with the Doctor in the hope, that the 'time is not far distant, when a medical school, with two or three hundred students without an hospital, and without any means of anatomical and surgical instruction, except what a course of public lectures affords, will be considered a humbug; such a state of things all the props which medical demagogueism can devise, cannot long support.

In replying to the objections against the establishment of an independent board of examiners, Dr. LINTON remarks that he does not desire to injure, but reform medical schools, by placing them upon the broad basis of their intrinsic merit and utility, by divesting them of all meretricious attractions.

Dr. LINTON contended with great effect, that the organization of medical institutions in this country was not in accordance with the spirit and genius of our government; that every state of Europe, though less free *politically*, is more liberal and democratic in every thing that appertains to medicine and general science. In Ireland there are a dozen medical schools, and but one examining board. The field for teaching is open to every one who chooses to occupy it. The same state of things exists in London: the board not requiring prescribed courses for lectures, but adequate knowledge *alone* of the candidate as a passport to its honors.

We gladly hail the cheering indication of the growth of correct opinion relative to a reform of medical education in this country, which is afforded by such free expression of enlightened views as Dr. LINTON has given.

We acknowledge the receipt of a splendid volume entitled 'The Lives of the Presidents,' which has just been published by Mr. E. Kearney, 56 Gold street, in this city, and have great pleasure in commending it to universal favor. The matter has been very carefully prepared, and the volume is a complete history of the United States since the birth of the Father of his Country. No library can be complete without this elegant work, and every family in the Union should endeavor to possess a copy.

THE MEDICO-CHIRURGICAL REPORTER.

Case of Penetrating Wound of both Lungs Recovery.

BY A. N. RUOOOCK, M. O., BRISTOL.

I was called up early on the morning of Thursday, May 10, 1838, to see police-constable 199, Silas Perrott, aged 22, who was represented to have been seriously wounded whilst on duty. It appeared that, between 3 and 4 o'clock, A. M., he had detected a housebreaker robbing some premises which stood alone and in a very retired situation. The policeman attempted to take the man into custody, which he strenuously resisted, and a struggle of half an hour's duration ensued, during which time the latter, who had much the advantage of the policeman in point of height and strength, attempted to throw him into a river, which was the boundary of the garden; and at length, finding he was likely to be captured, he drew from a case a long knife with a wooden handle, similar to that used by shoemakers, and gave the constable two desperate stabs in the body. The man eventually succeeded in getting away, leaving the policeman totally incapable of moving. In this state he was found soon after four o'clock, by the sergeant going his rounds, and with other assistance he was carried to the station-house.

I saw him between 5 and 6 o'clock; he was tolerably collected, but in a state of extreme exhaustion, from the combined circumstances of the severe nature of his wounds and consequent loss of blood, which I found to have been considerable, and from the desperate struggle in which he had been engaged; a considerable quantity of frothy blood was passing from his mouth; he had great difficulty of breathing, with constant cough, and a very small pulse varying from 140 to 159.

On examining the chest of the right side, I found a penetrating wound of rather more than an inch in width between the seventh and eighth ribs, about four or five inches below, and in a direct line from, the axilla; air was passing freely through the wound, and there was considerable emphysema. On the left side there was a corresponding wound, also, between the seventh and eighth ribs, but higher up and more posterior, situate almost in a direct line from the inferior angle of the scapula; very little air had escaped into the cellular membrane, but on passing the hand over the latissimus dorsi, the air was felt crackling under a considerable portion of that muscle. No doubt could exist as to the lungs being wounded on both sides, and I considered the prognosis as unfavorable as it could well be. As there was no fracture of the ribs, and the wounds were clean, I closed them both with adhesive plaster, applied warmth to the extremities, as he was shivering with cold, and administered some tea.

By nine o'clock, A. M., reaction had taken place; at ten o'clock his pulse had become tolerably steady at 120. Venesection to twenty ounces, which produced faintness; ordered a mixture of spermaceti and ipecacuanha wine to be taken once in three or four hours; to take nothing of any kind except tea and toast and water.

At three, P. M., he was laboring under more severe symptoms; his breathing was much oppressed; he had a good deal of pain and uneasiness about his chest, with a full pulse. Venesection to thirty-four ounces, which made him faint, and on recovering he expressed himself as much relieved.

At nine in the evening his symptoms were again aggravated, but not to so great an extent; his pulse had acquired so much firmness and strength that another blood-letting was readily foreseen, if not then absolutely necessary, and I took thirty ounces before he was faint; I ordered him ten grains of opium and soap pill, and left him for the night, with strict orders to be called if the symptoms returned.

I saw him on Friday morning at six o'clock; he had passed a tolerable night, and his state presented no symptoms which demanded interference. As I was desirous of obtaining some information about the wounds of the lungs, I removed one strip of plaster, and found that the air was passing with much less freedom than twenty-four hours ago, although the external wounds, in consequence of the continued oozing of blood, were not healing by the first intention. The wounds were again immediately closed; one ounce of castor oil was administered. Mr. R. Smith, the senior surgeon of the infirmary, saw him today; he considered he would have a hard struggle for it, and recommended a small abstraction of blood in the evening.

Eight, P. M. Has continued up to this time pretty much as in the morning; bowels relieved. I bled him to ten ounces; repeated the opium pill.

Saturday morning. He has passed a tolerable night again, and is free from pain; pulse soft, but quick. He takes the spermaceti mixture, from which he says he finds much relief and comfort. No air whatever passes through the wounds.

Sunday morning. He remains in a quiet state; the giant has evidently been conquered since Thursday evening. The external wounds are not at all disposed to heal, but those of the lungs are apparently closed. Allowed a small teacupful of thin bread and milk, which is the first food he has taken.

From this time he slowly but gradually progressed, and he left his bed about three weeks after the injury. The bloody expectoration continued for five or six days, and the emphysema gradually subsided. The wound on the right side of the chest did not heal for a month. Adhesion of the pleura on the right side has taken place to a considerable extent, covering a space as large as the hand; on the left side the state of the parts is not so easily ascertained, owing to the thick layer of muscle.

He subsequently was blistered, and took iodine for some time. He remains in the force on *reserve* duty, which does not expose him to cold or wet. He has had several attacks of shortness of breathing and pain in the side, but they have all given way to a day's confinement in bed, and a mixture of tartar emetic. These attacks have latterly been less frequent. He has got married, and at the time of my writing this he tells me his health has much improved within the last twelvemonth.—*Prov. Med. Jour.*

Case of Exhaustion without an Apparent Sufficient Cause.

BY JONATHAN TOOGOOO, ESQ.,

Senior Surgeon to the Bridgewater Infirmary.

A lady who had been confined about four months, and partially suckled her child in one breast only, was apparently in good health, until she heard some distressing news which agitated her a good deal. Her menstruation had returned in the usual way a fortnight before this event, since which she had occasionally been subject to slight discharge. A day or two after this fright she was seized with coldness, trembling, and slight faintness, which were soon removed by a cordial. Ten days after this she was attacked with pain in the bowels after an evacuation, and faintness, which continued long enough to excite some apprehension in the minds of her friends. She remained in a faintish state from two o'clock in the morning until seven in the evening, when I saw her, in consultation with her usual medical attendant. I found her lying on her back with a blanched countenance, and a surface of death-like coldness, without any pulse at the wrist. There was sickness, with occasional attempts to vomit, and pain in the forehead, which was kept constantly wetted at her request. I learned that, notwithstanding cordials had been administered, very little effect was produced by them, and that she constantly relapsed into the same state; I got down a good quantity of hot brandy and water, after which a feeble pulsation was felt at the wrist for a few moments, and although brandy, opium, ammonia, and every other restorative which could be given, were freely and unremittingly administered, her state became more alarming. If the pulse was perceptible after a large dose of brandy and opium, it sunk again immediately, the faintness increased, she constantly called for the smelling-bottle and fan, and became so restless that it was scarcely possible to keep her still; the surface was bedewed with a clammy sweat, the respiration was short and cold, and she either refused to swallow any thing, or instantly made an effort to reject it. Notwithstanding the extreme coldness of the surface, she objected to all external heat, which seemed to increase her faintness. She remained in this alarming state until two o'clock the following morning, after which time she became more tranquil, took nourishment, and retained it. During the next twelve hours she gradually but very slowly recovered some heat and steadiness of pulse, but was not able to be moved or undressed until thirty-four hours after the attack.

There does not appear to have been sufficient cause for the extreme and protracted state of exhaustion which occurred in this case. There was no undue lactation, for that had been imperfectly carried on, and but for a short period, nor was there any other drain to weaken her powers. It seemed like one of those sudden attacks of faintness which sometimes occurs without any warning after a small bleeding, which, as far as my experience goes, is protracted and alarming. It brought to my recollection the aphorism of Hippocrates, which, however, is more applicable to diseases of the heart, which there was no reason to suspect in this instance. Qui crebro et fortiter absque causâ manifestâ liquentur animo, derepente morientur.'

Case of Purpura, with Destructive Disease of the Ankle-Joint.

BY F. A. BULLEY, ESQ.,

Surgeon to the Royal Berkshire Hospital, Reading.

On March 14th, 1842, I attended the inspection of the body of a poor boy, 17 years old, who had died the day before, from a disease of the ankle-joint, for which he had been treated seventeen weeks, and, as far as I could learn, his complaints had existed for some time prior to that time. His case not having been under my immediate care, I am unable to detail its progress; but the patient seemed to be of a highly scrofulous constitution, and of a very delicate frame of body, and had latterly become hectic, and greatly emaciated by his disease. Some time ago, before his health had become too much affected by the local disease, amputation had been proposed to him; but to this he obstinately refused to assent, and it was observed that he became worse after the proposal had been made, from the effect the fear of it had upon his enfeebled nervous system, which, naturally weak, had become weaker through the wearing nature of his complaints. Latterly his legs had become nearly covered with minute purpurous spots, as well as the surface of his body, where there were some petechial stains, but not nearly so numerous or distinct as on the extremities.

Inspection.—The lungs were of a hahlthy appearance externally, and there was no appearance of any tubercular disease of their structure. They were somewhat darker colored than natural, from congestion of their vessels. There was rather more fluid than common in the pericardium. The heart was preternaturally small, not exceeding in bulk that of a child of six years' old; but it did not present the shrivelled and wrinkled appearance of its exterior, described by Dr. Hope, to indicate that it had ever been of greater size. The auricles were somewhat dilated, and, together with the ventricles and large vessels emanating from the heart, were filled with dark-colored fluid blood, which, when removed, had an unhealthy, treacly appearance, and seemed to have entirely lost its power of coagulation. The muscular structure of the body was pale and wasted. There were no appearances of petechial spots on any part of the serous tissues of the thoracic or abdominal cavities or viscera.

Examination of the Diseased Ankle.—On the inner side of the leg, over and just above the ankle-joint, there were two or three ragged openings of a dark, black color, from which, during life, had flowed a dark-colored ichorish fluid, but no pus. From these openings a probe could not be directly introduced into the cavity of the joint, owing to their not being immediately placed over the apertures in the capsular ligament, but by passing it underneath the skin for a short distance through the disorganized cellular tissue, the opening was readily discovered; the distance of the subcutaneous passage was, of course, greatest in those openings farthest from the joint. The integument over the inner projecting surface of the internal unciform bone was rather more dark-colored than the rest, and an aperture in the skin over it was somewhat larger than the others, and through this a roughness from necrosis of the surface of this bone was perceptible.

The connecting and capsular ligaments generally of the ankle-joints were thickened, and of a dark, unhealthy color, from the rupture of some vessels in their structure, from which blood had escaped, and there had seemingly been a passive hæmorrhage from these vessels for some time prior to his death. The synovial lining membrane had entirely disappeared. There was no appearance of any pus in the joint. The cartilage of the articulating portions of the astragalus and tibia had become absorbed, leaving a surface of smooth bone of a very dark and unhealthy color, being deeply injected with dark-colored blood, but not necrosed; on these surfaces there was a thin layer of brownish, tenacious, coagulated lymph, of an offensive smell, otherwise the interior of the joint had a dry appearance. The end of the tibia, for about an inch and a half, was in a state of high vascular congestion, and extremely soft, so as to be easily cut with a scalpel, as well as the astragalus and other bones of the tarsus, but their articulations with each other, with the exception of the ankle-joint, were not obviously affected, their cartilages and ligaments being entire, and apparently in no way affected by the disease.

REMARKS.

The foregoing case is not entirely wanting in pathological interest. It is, I believe, not unusual in purpura for hæmorrhage from the gums and mucous membrane to coexist with petechial spots on the various cuticular surfaces of the body; but in this instance there had been no epistaxis, nor had any hæmorrhagic tendency manifested itself in any other than the integumentary structure. The entire absence of the simultaneous appearance of the petechial disease in the serous parenchymatous tissue is also, I believe, uncommon. Perhaps, however, the exceeding smallness of heart is deserving the greatest consideration. I have observed that in several cases of cachectic disease which I have had an opportunity of inspecting after death, the heart has been found to be preternaturally small; and I have lately been disposed to attribute many of the symptoms observed during life to this imperfect development of the organ.

The feebleness of the circulation, the pale and cachectic appearance, the excitability or depression of the general nervous energy, the disposition to diseases of the joints and the denser structures of the body, from the want of sufficient power in the heart, from its small size, to propel its blood into the intimate capillary system of these tissues, by which their healthy innervation is disturbed, and they are rendered more liable to morbid change—lead me to think that many of the signs and appearances of scrofulous and other diseases of diminished vitality, are frequently dependent upon this abnormal condition. From what this arrest of development primarily results, it is difficult exactly to say, since the other organs of the body are often in such cases fully formed, and capable, considering the error in the circulating centre, of performing their functions comparatively well. It has struck me that it may take place in this way. A child may be born of unhealthy and half-starved parents—born, as it were, with its blood vitiated on its very entrance into life; subsequent imperfect nourishment from the mother in infancy, and afterwards in early youth, may keep up this impoverished condition of the blood for many years. I assume that in such a case the circulating fluid, thus altered in its chemical and vital properties, is incapable of healthily stimulating the nervous and muscular systems, and that thus the heart, not being roused to proper continuous action by the stimulus of the blood, like other muscles not duly exercised, ceases to enlarge, and thus its development becomes prematurely and permanently arrested. I may mention, that I have never before this had an opportunity of so fully investigating the pathology of purpura, so that I cannot say of my own experience whether the heart is usually found to be small in these cases; but I have read of instances where it has been so, and particularly of one related by Dr. Johnston, in the 'Cyclopædia of Practical Medicine,' which, after death the organ was found of an extremely small size; which leads me to think that such imperfect development of this organ is not rare in this disease.

In the dissection of the joint there is nothing particularly worthy of observation. The vascular and softened state of the bones, in the neighborhood of joints affected with scrofulous disease, has been so often and so minutely described, that the appearances in this case will be at once recognized as belonging to that particular class described by Sir B. Brodie and other authors, with this exception, that instead of the cancellous structure of the bones being filled, as is usual, with cheesy matter, it was filled with semifluid blood, the result, probably, of exhalation from vessels under the same state of disease as had affected the cuticular texture of the body.—*Prov. Med. Jour.*

THE COLLATERAL SCIENCES.

The Mode in which Poisons enter the Human System.

BY SAMUEL LANE, ESQ.,

Lecturer on Anatomy and Surgery, and formerly House Surgeon of the Lock Hospital, London.

On entering upon the study of the effects of any particular animal poison upon the human body, with the intention of undertaking the responsible duty of conducting a patient safely, and with as little delay as possible, through the many dangers and varied sufferings to which he becomes liable after the first introduction of such poison into his system, it appears to me incumbent upon us to consider well the general laws relating to the actions of poisons, whether mineral, vegetable, or animal, upon the animal economy; and to carefully notice the natural powers, which, when recovery takes place, spontaneously develop themselves, in order either to defend the system against the injurious agency of the poison, or ultimately to eradicate it from the constitution.

With these objects in view, I shall first direct your attention to the mode in which poisons enter the system, and I think I shall be able to adduce ample evidence that it is invariably by the circulating blood that this is effected; however speedy or however prolonged its action may be, whether the poison is to produce death by interfering with the functions of the brain, heart, lungs, or any other vital organ, or whether it is to act upon any essential constituent of the blood, or of particular tissues. Numerous ingenious and to me convincing experiments have been performed by various physiologists, tending to prove this position, some of which I shall relate to you; but it is right that I should inform you that many pathologists still conceive that it is by the 'sentient extremities of the nerves' that poisons enter the system, and produce their deleterious influence.

You will perceive that this is not merely an amusing physiological question, but one which must have most important practical bearings. You will be called upon as medical practitioners to administer remedies for the purpose of arresting the progress, or counteracting the injurious agency of poisons which may have been received into the system. It surely must be of consequence to determine whether your curative endeavors are to be directed to the nervous or to the vascular system,—whether your enemy lurks in one position or in another; and I think you will admit that the means you would adopt under the one notion would not be the same as those you would employ under the other. I shall now select some of the experiments to which I have alluded.

Magendie exposed the external jugular vein in a dog, and having separated it from its cellular attachments, placed a piece of card underneath the vessel, so as to isolate it from the surrounding parts, he now applied to the centre of the vein an aqueous solution of the spirituous extract of nux vomica. In four minutes the symptoms of poisoning made their appearance. The same experimentalist, having previously stupified a dog with opium, divided all the structures of its hind leg, with the exception of the femoral artery and vein, through which the circulation was carried on. He then inserted the upas tieuté poison into the foot of the mutilated limb. The animal was poisoned in the usual space of time required for this substance to take effect. He repeated the same experiment with the additional precaution of placing inert tubes in the artery and vein, and afterwards dividing these vessels; the limb was thus connected to the animal's body by the tubes only, through which the blood passed to and from the limb. The same effect followed on the introduction of the poison.

Again, Sigalas included a piece of intestine between two ligatures in a living animal, and tied all the bloodvessels leading to it, excepting one artery. An aqueous solution of nux vomica was now injected into the piece of intestine, and there secured for an hour without producing any symptoms; but on removing the ligature from one of the veins the poison took effect in six minutes. Emmert applied a ligature to the abdominal aorta in a dog, and afterwards inserted prussic acid into the foot of one of the hind legs. No ill effects followed in seventy hours:

the ligature was then removed, and in half an hour symptoms of poisoning appeared.

Fontana instituted some experiments with the intention of proving the correctness of the theory attributed to Hoffmann, namely, that the sentient extremities of the nerves were the agents by which poisons were introduced into the animal system, but they led him to an entirely opposite conclusion. He exposed the sciatic nerve in several rabbits, and applied the venom of the viper, prussic acid, and other poisons to it, having carefully provided against the possibility of the poisons coming in contact with the other structures: the animals remained unaffected. He now injected these poisons into the veins, and the animals were instantly destroyed.

In pursuing this subject further, having exposed the leg of a pigeon to be bitten by a viper, he amputated the limb before the symptoms of poisoning made their appearance, which was generally not till a few minutes had elapsed: the animal, nevertheless, died. On frequently repeating this experiment, he found that unless the limb were removed within twenty-five seconds after the introduction of the poison, the result was as certainly fatal as if the operation had not been performed.

A very ingenious but complicated experiment instituted by Messrs. Addison and Morgan, would at first sight appear to favor the opinion that the nerves and not the blood were the conducting media of poisons. The carotid artery and jugular vein of one dog were connected with the corresponding vessels of another; and the arrangement was made reciprocal, but of course on one side only in each animal, so that a portion of the arterial blood of the one animal was conveyed by one carotid artery to the brain of the other; while the corresponding jugular vein of the recipient animal conducted the blood back not into its own vessels, but into those of the animal from which it had received the supply. It was supposed by this arrangement that a complete interchange of the blood circulating in the two animals would be effected, and that if poisons acted through the blood, on introducing them into one animal both ought to be nearly equally affected. The poison of nux vomica was now inserted into the back of one of these animals, which destroyed it as usual, but the other was not at all influenced by it.

As great stress has been laid upon this experiment, it will be as well to consider more fully how the sound animal would be circumstanced; in the first place, with respect to the stream of arterial, then to the stream of venous blood supplied to it by the poisoned animal. This, I think, will be better accomplished by tracing the poison from its first introduction, supposing it to follow the circulation of the blood. The poison would be first returned with the blood to the heart of the poisoned animal; from thence it would pass through its lungs, and to the heart again, before it entered the arch of the aorta. Three streams of the blood containing the poison would be now conveyed by the two vertebrals and one carotid to the brain of the poisoned animal, while one stream of it only could reach the brain of the animal which remained unaffected. This same stream, or the greater portion of it, would be returned by the corresponding jugular vein into the vessels not of the sound but of the poisoned animal. Again, with respect to the veins, the two jugulars and the two vertebrals would return the blood from the brain of the poisoned animal; only one of these could convey any blood to the sound animal. The necessary obstructions where the tubes were connected to the vessels, or arising from the motions of the animals, would all be in favor of the sound animal receiving but little of any of the poisoned blood. The blood in the veins on meeting with obstruction would readily pass by anastomosing branches into the other venous trunks; and the carotid and vertebral arteries so freely communicate, that a considerable downward current would require to be overcome before the poisoned blood could reach the brain of the sound animal through its connected carotid. It should also be remembered that the lymphatic system of the poisoned animal was entirely unconnected with that of the sound one. Mr. James Blake, moreover, in his valuable papers on poisons, states, that on repeating this experiment, and applying the hæmadynamometer, an instrument which measures the pressure and force of the circulating blood within the vessels, it was evident, on account of the weaker circulation of the animal into which the poison was inserted, that the sound animal alone afforded blood to the one that was poisoned.

If Messrs. Addison and Morgan had selected a part of the body where one artery and one vein would convey the entire blood of the part, as is the case in the lower extremity, and had the one animal only been destroyed, the experiment would have been conclusive. Vernière, however, has sufficiently proved that the result would have been very different. He applied a ligature tightly round the leg of an animal, so as to stop the circulation of the blood, and then inserted the extract of nux vomica into its foot, but without any effect. He now loosened the ligature carefully, so as to permit the arterial blood to enter the limb, but to prevent the return of the venous blood. A vein was then opened below the ligature, and the blood collected, which, when injected into the vessels of another animal, immediately destroyed it, while the animal into whose foot the poison had been inserted perfectly recovered.

Mr. James Blake, in his Physiological Essays on the action of poisons, relates an experiment performed by him. self, directly bearing upon this question. 'The abdomen of a dog was laid open. A ligature was passed under the vessels entering the liver, and tied. Three drachms of hydrocyanic acid of Scheele's strength, containing 3.3 per cent. of acid, were introduced into the stomach through an opening in its parietes. The poison was thus brought into contact with a large surface, freely supplied with nerves, at least with those nerves on which poisons are supposed more particularly to produce these impressions. (See Addison and Morgan on Poisons, p. 35.) Under these circumstances the poison remained in the stomach ten minutes, without producing the slightest general effect. The ligature on the vena portæ was then removed, so as to restore the circulation over the viscera. One minute after the removal of the ligature the animal began to experience the effects of the poison. The ligature was again replaced; but before this could be effected a sufficient quantity of the poison had been absorbed to arrest the respiratory movements, and the animal must have speedily perished, had not artificial respiration been had recourse to. After this had been continued eight minutes, the animal was sufficiently recovered to continue the respiratory movements itself. After a short interval the ligature from the vena portæ was again removed. The animal was dead in two minutes. This experiment affords a strong proof of the non-action of poisons when merely applied to the extremities of nerves; for not only did the poison produce no effect before it entered the circulation, but we find the animal recovering from the effects of the poison, with three drachms of hycrocyanic acid still in its stomach.'

The rapidity with which death follows the application of hydrocyanic acid, the woorara poison, and some others, which has been described as instantaneous, was considered to be explicable only on the supposition that the nerves conveyed the poisonous influence to the brain, with the same velocity that they conducted their ordinary impressions to that organ. But Mr. Blake, by numerous varied and well-conducted experiments, has completely set this matter at rest. Time will only permit of my mentioning his conclusions; for the experiments themselves I must refer you to his papers read before the Royal Society, and which you will find published in the 'Edinburgh Medical and Surgical Journal,' Nos. 142, 148, and 149. In my opinion he has there most satisfactorily proved,—'First. That the time required by a substance to permeate the capillary vessels may be considered inappreciable. Second. That the interval elapsing between the absorption of a substance by the capillaries, and its general diffusion through the body, may not exceed nine seconds. Third. That an interval, always more than nine seconds, elapses between the introduction of a poison into the capillaries or veins, and the appearance of its first effects. Fourth. That if a poison be introduced into a part nearer the brain, its effects are produced more rapidly. Fifth. That the contact of a poison with a large surface of the body is not sufficient to give rise to general symptoms, as long as its general diffusion through the body is prevented.' He has drawn up the following table, deduced from his experiments, to show that these rapidly fatal poisons act in different animals in the exact ratio of the rapidity of the circulation :—

Time required for the blood to pass from the jugular vein to the capillary terminations of the coronary arteries :—

In the Horse	16 seconds.
Dog	11 to 12
Fowl	6
Rabbit	4

Time that elapses between the introduction of a poison into the jugular vein, and the first symptoms of its action :—

In the Horse	16 seconds.
Dog	12
Fowl	6½
Rabbit	4½

If what I have here brought before you, with respect to the more virulent and all but instantaneously fatal poisons, has convinced you that they act through the medium of the blood, and that the nervous system is circumstanced exactly as the other tissues of the body with respect to them, namely, that the poisons being in the blood are conveyed to the organs and tissues with the vital fluid, and thus produce their pernicious and fatal influences ; some corrupting one organ ; some another ; some spoiling the whole mass of blood by acting upon one of its essential constituents, and thus deranging the nutrition of all structures requiring that constituent ; if, I say, you are convinced that the rapidly fatal poisons act through the blood, there will be no difficulty in satisfying you that those which produce their effects more slowly on the animal system, as is the case with the poison of syphilis, of small-pox, of glanders, &c., do so through the agency of the blood ; for the very slowness of their action renders it improbable that the nerve is the conducting medium. Indeed, our notions with respect to the instantaneous passage of the will, or of sensation by the nerves, appears to have misled physiologists with respect to those poisons which may be said, comparatively speaking, to be instantly fatal. But as regards glanders, direct proof can be given ; and with respect to syphilis and small-pox, although indirect, yet pretty convincing, evidence can be adduced that these poisons are in the blood, and may be propagated by the blood.

Professor Coleman transfused the blood of a glandered horse into the vessels of an ass which had been previously bled. The ass was attacked with glanders, 'rapid and violent in degree ;' and from this animal others were inoculated. Both glanders and farcy were the result. The poison of syphilis and of small-pox cannot be transferred to animals ; we have not, therefore, the same experimental proof, but, as I have stated in a former lecture, the fœtus in utero becomes contaminated with the syphilitic poison ; and even the milk of a person laboring under secondary or constitutional syphilis will communicate the disease to an infant. And I am not aware that any physiologist has denied that the nourishment of the fœtus in utero is derived from the blood of the mother, or that the milk is a secretion from the blood. In reference to the small-pox poison, we have equally strong evidence that it is transmitted by the blood of the parent to the fœtus. Instances are on record of children being born with an eruption of small-pox, both when the mother has had the disease at the time, and also when she has been exposed to it a short period previous to childbirth, but having formerly had small-pox, is herself no longer susceptible of it. The fœtus has, nevertheless, taken the disease. Children have, moreover, been born marked with small-pox, proving that they have undergone the disease in utero, and have remained as completely unsusceptible of it in after life, as tested by inoculation, as if they had had it subsequent to birth : and this has occurred when the parent has gone through the disease during her pregnancy, as well as when she had gained her immunity by having been formerly attacked by it. From these data, gentlemen, I think we are warranted in considering it an established fact, that the syphilitic virus, as well as all other poisons, are in the blood, and that they produce their effects on the different organs and tissues through the medium of that fluid. You will find that, throughout this course of lectures, I shall steadily bear this circumstance in view, and that I shall consider all the remedial means employed in the treatment of this disease in reference to their influence upon the virus, as situated in and carried to the tissues by the circulating vital current.

In connection with this part of our subject, I will now beg your attention to the channel by which poisons enter the blood. You will find that it is either by direct insertion into this fluid contained in its proper vessels, as is the case in inoculation, and in all recent poisoned wounds ; or by endosmosis and exosmosis through the thin parietes of the capillaries, whether of blood-vessels or lymphatics. Mucous membranes, therefore, an ulcerated surface, an exposed serous membrane, the cutis unprotected by the cuticle, or when the cuticle has been permeated by the poison, all present the necessary conditions for the absorption of a poison. The other requisite is, that the poison itself should be either in a fluid or gaseous state. As I have elsewhere remarked, (article Lymphatic System in Dr. Todd's Cyclopædia of Anatomy and Physiology,) the capillary blood-vessels are permeated entirely in accordance to physical laws ; but not so the lymphatics and lacteals, which appear to possess a selecting power as a vital endowment, for they do not indiscriminately absorb all fluids brought in contact with them, but ordinarily reject those which are not nutritious. I will here beg you to observe, that when we find the absorbent vessels inflamed—from conveying poisonous matter, it is generally an animal, not a vegetable or mineral poison that has been applied—as we see in syphilis, the dissecting-room poison, in glanders, and farcy, &c.

It has been noticed that serous membranes allow of the absorption of poisons more readily than mucous ; and, again, that certain mucous membranes possess this property to a greater extent than others : for instance, the respiratory, to a greater extent, than the alimentary. This has not been satisfactorily accounted for. The decomposing power of the secretion of the particular membrane will probably in part explain this. It is known, for instance, that the poison of the viper, of syphilis, and many others, may be swallowed with impunity ; but it must be confessed, that their action upon other mucous membranes, and upon serous membranes, is not well understood.

In order that we may the more readily comprehend how so minute a quantity of poisonous matter can have the effect of vitiating the entire mass of blood, as we find is the case in small-pox, syphilis, in the venom of the viper, or in hydrophobia, in the poison of arsenic of prussic acid, or the woorara, it will be necessary to bear in mind, 1stly, the very high combining numbers of most of the animal compounds; 2ndly, the small quantity of some of these, even in the whole 30 lbs. of blood, which is the quantity estimated to exist in an adult person; 3rdly, the low combining number of some of these poisons. Reasoning upon these data, you will be surprised to find how small a quantity of a substance combining with one of the essential constituents of the blood may appropriate the whole of it, and thus cause death either by its absence, or by the production of some new compound which may be incompatible with life, or at any rate with the healthy condition of the organs or functions of the body. Mr. Ancell, to whom I am indebted for this mode of reasoning upon the subject, has favored me with an application of it as regards the fibrin of the blood, which I will take the liberty of reading to you:—

'Fibrin, which plays so important a part in the phenomena of life, may be regarded in a chemical point of view as a compound of the 20 equivalents of the organic principle protein, 2 equivalents of sulphur, and 1 of phosphorus; or of 8740 parts of protein, a definite compound of oxygen, hydrogen, carbon, and azote, 32 parts of sulphur, and 16 of phosphorus. (Mulder.) The whole of the fibrin of the blood contained in the vessels of a healthy adult at one time is estimated at 392 grains, (*Lancet*, 1839–40, vol. i. p. 316, Table IX.,) which quantity must contain less than one grain and a half of sulphur as an essential constituent. Any substance, therefore, which introduced into the blood is capable of abstracting this small quantity of sulphur from its fibrin, would probably destroy, in a very few moments, the coagulating power of the whole mass of circulating fluid.

'Let us suppose arsenic to be such a substance. Its equivalent number is 28, that of sulphur being 16. The per-sulphuret of arsenic is a compound of 2½ equivalents of sulphur and 1 of arsenic, or 40 parts of the former to 38 of the latter; accordingly, less than a grain of arsenic would decompose all the fibrin of the blood of an individual adult.

'Again, let any substance, hydrocyanic acid for instance, be assumed as capable of forming a definite compound with the fibrin in the living vessels, the equivalent of the acid being 27, and that of fibrin 8788; then, should they combine in the proportions of one equivalent of the former to one of the latter, the whole of the fibrin of the blood would be converted into a new compound, with new properties, probably incompatible with life, by the agency of about one grain of pure hydrocyanic acid.

'These may be taken as analogues of what actually occurs in many cases of acute poisoning.

'In the more chronic forms of poisoning, that from the venereal virus for instance, the material introduced into the blood must disturb the molecular action of, or enter into combination with, some of the complex constituents of that fluid less essential than fibrin to the life of the individual.'

Professor Liebig has drawn an interesting comparison between the process of fermentation and the action which is excited by the introduction of certain poisons into the blood, which may not be altogether devoid of instruction. He points out that in the process of fermentation the yeast, which is oxidised gluten undergoing putrefaction, effects a decomposition in the sugar of the wort, by which it becomes converted into alcohol and carbonic acid; while the gluten, which the wort also contains in large quantity, undergoes oxidation, so that the original yeast employed appears to have multiplied itself perhaps a hundred fold. But if the yeast had been placed in a solution of sugar free from any gluten, the conversion of the sugar into carbonic acid and into alcohol would have been equally effected, but instead of the yeast being reproduced in greater quantity, it would have entirely disappeared. Now, we see that in small-pox, when the poison is once introduced, an action is set up by which a conversion takes place of some of the constituents of the blood or of the solids into a matter similar to itself, and that when the disease has run its course, the system is no longer susceptible of this action, and can no longer reproduce the poison, any more than yeast can be produced in a solution of sugar undergoing fermentation after the gluten has been exhausted. He argues, therefore, that the poison has acted upon some element originally in the blood, but which is not essential to life, and which, when once removed, is not reproduced. Thus he would explain the mode of action of all poisons which are contagious or infectious, and which leave the system unsusceptible of a second attack, such as measles, scarlatina, small-pox, &c. While in those poisons of which the system remains susceptible as often as the poison is applied, as in syphilis, the venom of the viper, the dissecting-room poison, and most others, especially mineral and vegetable kinds, he would say that they acted on an element of the blood essential to health, if not to life, but which is constantly being supplied, just as in fermentation; if gluten were constantly added to the fermenting fluid, yeast would continue to be formed capable of inducing the same action in a fresh solution of sugar. Under this hypothesis it is easy to explain the extraordinary powers of the two poisons of small-pox and cow-pox, each reciprocally, in rendering the system incapable of carrying on the diseased actions peculiar to them. We have only to suppose them to act upon the same constituents of the blood, and to continue to appropriate every particle of it in reproducing themselves, as is the case with the yeast in fermentation, as long as any gluten remains in the saccharine solution; but if by any other means the gluten can be separated, the reproduction of yeast would immediately cease.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Dec. 3, 1842.

29 Men, 33 Women, 46 Boys, 34 Girls. Total, 142.

DISEASES.

Apoplexy	2	Intemperance	1
Abscess	3	Inflammation	0
Asphyxia	0	Of liver	1
Burned or scalded	2	Of bladder	0
Cachexia	0	Of brain	2
Cholera infantum	0	Of stomach	2
Colic	0	Of throat	2
Congestion	0	Of lungs	8
Consumption	28	Of bowels	4
Convulsions	8	Of chest	1
Croup or hives	5	Of womb	1
Cancer	3	Insanity	1
Debility	2	Marasmus	5
Delirium tremens	0	Measles	1
Diarrhœa	7	Old age	0
Death from poison	0	Organic disease of heart	2
Dropsy	2	Palsy	2
Dropsy in head	5	Retention of urine	0
Dropsy in the chest	0	Rheumatism	0
Drowned	1	Spinal disease	0
Dysentery	4	Suicide	2
Erysipelas	0	Sprue	0
Eruption	0	Small-pox	5
Fever	0	Tumor	0
Scarlet	7	Teething	2
Typhoid	4	Ulceration of intestines	1
Puerperal	1	Unknown	0
Remittent	2	Ulceration of bladder	0
Billious	1	Ulcers	0
Inflammatory	0	Varioloid	0
Intermittent	1	Whooping cough	7
Hip Disease	0	Worms	0

JOHN H. GRISCOM, City Inspector.

City Inspector's Office, Dec. 5, 1842.

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, DECEMBER 17, 1842. No. 25.

COMMUNICATIONS.

PHILOSOPHICAL AND PHYSIOLOGICAL REFLECTIONS SUGGESTED BY THE PERUSAL OF J. LIEBIG'S ORGANIC CHEMISTRY.

BY THOMAS HALL, OF BOSTON, MASS.

[*Written for the Lancet.*]

The phenomena illustrated by J. Liebig, in his work entitled 'Organic Chemistry,' the action of oxygen upon the transformations of the tissues, their formations into non-compounds, together with the generation of heat and force, suggest reflections, and lead to theories, which though not strictly true in themselves, may give rise to a spirit of inquiry by which truth may be eventually elicited. This distinguished chemist has supplied the key by which many of the secrets of nature may be unlocked: for up to this time, physiologists have not paid that attention to chemistry it deserves, as is evidenced by this work of J. Liebig. Of many of the processes going on in the human organism we have been hitherto completely in the dark; and many words are used by physiologists devoid of meaning, such as vital force, vital turgescence, &c. Liebig says truly, that the vital force, or living principle, will ever baffle our inquiries, and that so long as they are directed to that object, they will be useless. The world of nature is however spread before us, we perceive the effects of that principle, and into those effects we can carry our inquiries.

The doctrine of chemical affinity, or the cause of one substance combining with another in preference to a third substance, is founded upon their opposite electrical states; viz. if two substances are in opposite electrical states, they combine and form a chemical union; and a substance is formed by the union of the two bodies altogether dissimilar to that which characterized their normal state; but when two bodies are in the same electrical state, they repel each other. Many of the processes in the arts are conducted upon this principle, the art of calico-printing is one: the cotton of which the fabric is composed is in the same electrical state as the colors with which it is printed; the cotton is first saturated with a mordant, which changes this state, and the colors immediately form a chemical union with such parts of the cotton as are impregnated with the mordant. Again, in the dyeing of those splendid blues by means of the ferro-prussiate of iron; by first impregnating the stuff with the oxide of iron, and then assisting the decomposition of the salt with the sulphuric acid, the prussic acid and iron of the salt form a union with the iron with which the goods are impregnated, (Prussian blue,) and the sulphuric acid forms a union with the potash (sulphate of potash.) Acids are in positive electrical states, and alkalies are in negative electrical states; there are then two electricities, the positive and the negative, which can be obtained separately by the decomposition of the electric fluid by means of the voltaic pile, and the fluid evolved from the positive pole is acid, and that evolved from the negative pole is alkaline. Substances subjected to the action of the pile, if formed of two or more constituents, are decomposed, and the acids and alkalies carried to their respective poles: again, the fluid evolved from the positive pole acts upon the human frame as an excitant, and that evolved from the negative pole as a sedative; in short, their effects are analogous to those of acids and alkalies. It is then the affinity existing between the two electricities that is the cause of chemical action, and indeed of almost all the phenomena of nature, and the reason that acids and alkalies saturate each other whenever they come in contact, or circumstances favor their mutual action.

The virtues of many plants, mosses, and lichens lay in their acid or alkaline bases. I will mention a few, from which, by the application of this principle, a mine of wealth has been extracted. The rosella tinctorium, a native of the Canaries, is employed for the preparation of a splendid dye used in coloring silks and woollens; the basis of its coloring matter is an acid; it is therefore treated with an alkali, (a solution of ammonia is generally employed,) and this uniting with the acid base, the color is developed. The same is true of the lichen tartareus and of the lichen pustulatus, the former of which grows on the rocks of Norway and Lapland, and probably on the mountains of this country, the latter on the shores of the Mediterranean. The application of this principle has rendered the woods from the bay of Campeachy and Spanish Main of the greatest consequence. In all these instances there is but one normal constituent of the color existent, viz. its base, which on being saturated with an alkali or acid, the color is formed and developed. These are examples of the union of the two electricities. Matter is infinitely divisible: the perfume of essences and of flowers, the minute quantity of strychnine required to affect the taste of an immense body of water, are proofs of this; yet its smallest conceivable atom is an electric, and its modes of being subject to and changing with its electrical states. The processes of fermentation and putrefaction are from the same cause, and I believe that contagion and miasmæ operate their effects in a similar manner; for these morbid poisons are particles of matter, though from their extreme minuteness they have hitherto eluded every attempt made to ascertain their true character. Doubtless their effects are produced by their uniting with particles of the frame in opposite electrical states to themselves, thus forming new products by the action of which the decomposition of the living tissues is produced. Take the poison of Asiatic cholera, by way of example: unless it existed in the atmosphere and in clothes as particles of matter, the diffusion of chlorine for the purpose of neutralising its effects would be useless, and that this gas forms a union with the poison of Asiatic cholera by virtue of electrical affinity, there is not the slightest doubt; it does not destroy it, for matter is indestructible, but it changes its form, (its mode of existence,) and that they may be again separated from each other, and the latter produce its destructive effects, is more than probable, from the following circumstances. At the time the Asiatic cholera visited New York, I resided at Newtown, Long Island; its manure with the sweepings of its streets, was conveyed as usual up the creeks and rivers, and deposited for the use of the farmers in heaps, at places called kilns. I expressed to Dr. Bailey, (since deceased,) an apprehension that the contagion would be eliminated in consequence of the fermentative process commencing in the manure: and shortly after the expression of this opinion the disease broke out with destructive violence in the immediate vicinity of the kilns. The weather at the time was hot, with but few currents of air, so that the contagion was not diffused, but spent its violence in the immediate neighborhood of the manure.

One of the objects of these remarks is to illustrate the process of assimilation or nutrition. Liebig has demonstrated that from the albumen and fibrine of the blood, all the tissues and parts of the human organism are formed, by analysing the constituents of the blood, and the metamorphoses of the tissues, and proving their identity: viz. that they contain the same constituents, with the addition of the elements of water or of oxygen, only differently arranged; and proving his first position by the formation of a young animal in the egg of a fowl, and the latter by examining the constituents of the urine and of the bile. He asserts (what indeed is recognised by physiologists) that no chemical change takes place in the blood until it enters the capillaries, where it is changed from arterial into venous blood. The capillaries and the parenchyma of organs, are then the grand laboratories in which assimilation is effected, and heat and force generated; for in them chemical action takes place. The red globules of arterial blood being in a positive state of electricity, (their iron being in the state of peroxide,) and coming in contact with the transformations of the tissues, mutual action ensues, and the products of that action being carbonic acid and water. Now as 'all bodies in the act of burning render contiguous particles negative, whilst the oxygen imparts electricity to the products of combustion, which thereby become positive;' (Volta, La Place, and Lavoisier,) the red globules become negatively, and the new products positively electrical; but in the act of burning, the burning bodies act upon those parts of the tissues contiguous to themselves, and render them negative, and as such parts of the albumen adapted to the purposes of assimilation, become in consequence positive, they immediately unite. Thus the process of reparation commences where the process of waste begins. It matters not what may be the relative electrical states of such parts of the albumen as are adapted to the purposes of nutrition and the tissues, those relative states are changed by the combustion caused by the action of the oxygen of the red globules upon the transformations of the tissues, the burning bodies abstracting from those parts of the tissues in immediate contact with themselves a portion of their electricity, thus rendering them negative. According to this view, assimilation is not effected by mere capillary attraction, for from mere capillary attraction chemical union does not take place, neither is there any new product generated; however adapted the albuminous parts of the blood may be for the purposes of assimilation, they have still to be converted from a fluid to a solid state, and this (a true chemical action) is effected by the electric spark elicited by the process of combustion. According to Poillet, (An. de Ch. et Ph. xxxv. 401, and xxxvi. 5,) mere changes of form, without chemical action, do not elicit the electric fluid.

It is an established law, that an electrified body tends to produce in contiguous substances, an electrical state opposite to its own; the electricity developed in this way is said to be induced, or to be excited by induction; the movements of light bodies towards an excited stick of sealing wax illustrate this; for the vicinity of the negative sealing wax renders surrounding objects positive, therefore a mutual attraction is excited. The action of the red globules on entering the capillaries is in accordance with this law: thus in the world of nature, the approach of an electric or non-electric body causes in the objects of its immediate vicinity an electrical excitement contrary to its own, and a tendency to unite; as in the case of a positively electrified cloud approaching the earth, all objects it approaches become negatively excited, and when it is within what is called striking distance, the equilibrium is restored, with a report and a flash of light exactly as in the discharge of the Leyden phial.'—Turner. So when the red globules approach the transformations of the tissues they cause in them an electrical excitement contrary to their own; and when, like the cloud approaching the earth, they arrive within striking distance, precisely the same electrical phenomena take place. Though the action of the oxygen of the red globules upon the transformations of the tissues are the chief source of heat and force, they are not the only one, for the change of the fluid parts of the albumen to a solid state, in the process of assimilation, is productive of the same agents though in a minor degree. There is then a constant force generated by the chemical action of the oxygen of the red globules of the blood upon the transformations of the tissues, similar to that generated by the oxidation of the metals in the galvanic trough; and this force (Liebig has shown) is distributed to the nerves, they are the conductors of this force by means of which all the motions of the body are effected. According to Liebig, when the body is in a state of quietude, the transformation of the tissues does not take place to that extent as when it is exercised; and the rapidity of its transformations, with the amount of oxygen inspired, proceed *pari passu* with the amount of labor or muscular exertion it undergoes. Again, in a state of rest, the amount of food consumed for the purposes of combustion is not so great as in exercise, or, if as great, causes repletion and disease; or the transformations of the tissues are not sufficiently oxidised, and urinary calculi and biliary formations result; or the oxygen acts upon the tissues themselves, causing pulmonary and other affections: and on the other hand, when the body is subjected to labor, and is imperfectly fed and clothed; when with an increased supply of oxygen and a greater waste of the tissues, the fuel to supply the one, and the nutriment to sustain the other are diminished; the nervous energy is diminished, the muscular fibres shrink, and the frame is not developed as it is under favorable circumstances. This explanation of Liebig's is satisfactory, but it does not account for the expenditure of the vast amount of force generated at all times, and under any circumstances. What then becomes of this surplus force? It is expended in the process of respiration, digestion, secretion, and excretion. During active exertion we know that the process of digestion is in a measure suspended. Experiments made upon greyhounds have demonstrated this fact. The galvanic influence during bodily exertion is in a great measure withdrawn from the digestive organs, and thrown upon the nerves distributed to the muscles and respiratory organs; the gastric and biliary secretions are secreted in a minor degree, and the consequent formation of the chyme and the chyle are arrested. In a state of rest this order is reversed, and the processes of secretion and digestion proceed. Still in persons of sedentary habits, there must be a considerable amount of force generated more than is expended by the economy, the constant accumulation of which would destroy the balance of health; this surplus force passes from the body by means of those electric conductors with which it comes in contact, and by the earth; and when the body is excited by great muscular exertion, and the expenditure of force is greater than that supplied by the processes of combustion, electrical currents are established from them and from the earth, by means of which the normal electrical condition of the body is sustained. 'When two bodies are excited by friction they are rendered oppositely electric; but if a tube of glass be rubbed by a person communicating with the ground, the glass will become positively electrical, while the hand of the operator manifests no signs of excitement. The cause of this is obvious. The operator is not electrified because the earth restores the electric fluid as soon as it is withdrawn by the glass; but if he is insulated, the indications of negative electricity will immediately appear.'—Turner. Thus the action of the hand upon the glass tube, and the transfer of electric matter from the electrical machine, are exactly analogous, and the capability of the body to sustain great and prolonged exertion, arises from the establishment of electrical currents between the earth and itself. By what means are these electrical currents produced? By friction, by excitement, by action; by means of which the electrical equilibrium is destroyed, and the tendency of the electric fluid to restore its equilibrium. It is asserted that the nerves act by virtue of a vital influence, and that the whole frame is endowed with such an influence there cannot be a doubt, but this influence can only produce its effects by natural means. The living principle is, as it were, inseminated into the natural body, like seed into the natural ground, and takes from the storehouse of nature the materials fitted for its purposes, and arranges and disposes of them accordingly: but this it does, in strict accordance with, and by means of those laws which govern nature. Now the former eludes our inquiries, but the latter are palpable to the bodily senses; but a disposition to search for that which is in truth unsearchable, characterizes the philosophy of the day, and is the true reason of the delay that has occurred in discovering the source of nervous and muscular action; but that it arises and is generated by chemical action, has, I think, been demonstrated beyond a doubt by J. Liebig. Let any one peruse the galvanic experiments of Dr. A. Ure, on the bodies of criminals, after their execution, and it will tempt him to exclaim with the Doctor, 'that if without cutting into and wounding the spinal marrow and blood-vessels in the neck, the pulmonary organs had been set a playing at first (as I proposed) by electrifying the phrenic nerve, (which may be done without any dangerous incision,) there is a probability that life might have been restored.'

The general inference deduced by Dr. Philips from his multiplied experiments, are, that voltaic electricity is capable of effecting the formation of the secreted fluids when applied to the blood, in the same way in which the nervous influence is applied to it; and that it is capable of occasioning an evolution of caloric from arterial blood. When the lungs are deprived of the nervous influence by which their action is impeded, and even destroyed; when digestion is interrupted by withdrawing this influence from the stomach; they are renewed by exposing them to the influence of the galvanic trough: hence says he, 'galvanism seems capable of performing all the functions of the nervous influence in the animal economy; but obviously it cannot excite the functions of animal life, unless when acting on parts endowed with the living principle;' viz. when the living principle is extinct, the body can only be actuated by a power generated by friction, or chemical action, out of itself. The inference is plain, so long as the body is actuated by the living principle, the power is generated within itself by similar means, and that it is a galvanic power.

The electric fluid developed in the burning of the metamorphoses of the tissues, is equalised in the body in the same manner that it is in the earth itself, and is called into action by the excitement of one or more of the great nervous centres, from whence it is distributed by means of the nerves (as by the conducting wires of the galvanic pile) to the secreting surfaces by the way of the current of the blood, eliminating from it acids and alkalies where the conducting nerves terminate. So long as the blood circulates in the arteries, the red globules being in the same electrical states repel each other, they have besides a rotatory motion independently of the motion arising from the impulse of the heart. Dr. Copland, in his Medical Dictionary, Art. Blood, says, 'this force with which the globules of the blood are endowed whilst circulating in the vessels, I have in my physiological notes imputed to the influence exerted by the ganglial nerves on the interior of the vessels which they everywhere so abundantly supply. But besides this force of mutual repulsion, to which the fluidity of the blood is evidently owing under the vital influence exerted by the organic nerves on the vessels, there is evidently another force also in motion, by which the globules are attracted by the tissues when they are brought more immediately in contact with them during their circulation in the minute vessels.' The vital force, as I have before observed, is a term destitute of meaning, since we cannot understand it; but we may understand, that in some way or other it excites the nervous organic centres, by which galvanic currents are produced which actuate the blood in the vessels, and that it is this force which preserves its fluidity. As the production of this force, by which the motions of all parts of the body are effected, is owing to chemical action, and the force itself the galvanic fluid, and as the nerves are the conductors of this force, we may perceive how the muscles are enabled to perform their functions. The *modus operandi* may be difficult to explain, and errors in an attempt of the kind are to be expected. According to Ritter, the electricity of the positive pole augments, while that of the negative pole diminishes the actions of life. The pulse of the hand, he says, held a few minutes in contact with the positive pole is strengthened, and that of the one in contact with the negative pole, enfeebled; the former is accompanied with a sensation of heat, the latter with a sensation of coldness.' This observation of Ritter's is confirmed by the concluding observation of A. Ure, at the end of the account of his galvanic experiments, to this effect:—'For the purpose of resuscitating dormant irritability of nerves, or contractility of their subordinate muscles, the positive pole must be applied to the former, and the negative pole to the latter.' This proves also that the conductors of the galvanic fluid are the nerves and not the muscles, since by applying the positive pole to the latter, and the negative pole to the former, action is excited in a much slighter degree. A. Ure's observations, 'a muscular mass, through which the galvanic energy is directly transmitted, exhibits very weak contractile movements. in comparison with those which are excited by passing the influence along the chief nerve of the muscle.'

The many galvanic experiments performed, and the uniform action of that fluid upon the nerves, and through them upon the muscles, is, I think, conclusive as to the kind of power consumed by these latter, in the exercise of their functions; but as the experiments performed have been mostly upon the body when not animated by the living principle, and its expenditure not regulated by volition, its effects have of course been irregular; but many striking facts have been elicited. Entering the muscle by its chief nerve, and at its origin, it quits it at its insertion, and is thence carried back to its chief centre of nervous excitement, thus completing the voltaic circuit; the forces acting in the direction of the voltaic current. Symmer maintained that 'bodies in their ordinary unexcited condition, contain both kinds of electricity, in a state of combination, and as they then neutralise each other, no electrical phenomena are apparent: that friction produces excitement by separating the two principles, and the excitation continues until that kind of electricity which has been withdrawn is restored.' So when the great centres of the nervous system are excited by the will, electrical currents are produced, which proceed from them to all parts of the body, forming voltaic circuits, of which the parts actuated form a segment. That no action is produced, until an electrical current is produced, by the establishment of the voltaic current, is evident from the fact, that none take place until the moment the galvanic chain is complete, by establishing a communication with the parts constituting it. The electricity developed by the action of the nervous centres, is derived from the body at large; from those centres it is sent to the muscles, to the blood-vessels, to the organs of respiration, digestion, secretion, &c.; if muscular exertion is great, it is withdrawn from one or more of the former and distributed to the latter; and if the body, by coming in contact with electrical conductors, loses a part of its electricity, it is immediately restored from the earth. Fatigue and bodily exhaustion does not arise from the expenditure of force, but from the loss of nervous susceptibility and muscular irritability, by too long continued excitement, which are again recreated by repose.

It may be imagined that as muscular motion, respiration, digestion, secretion, &c., are carried on by a galvanic influence, and that as any loss of this fluid is supplied from its grand reservoir the earth, that there ought not to be that difference in the bodily powers of different individuals, which we know exist; but the great nervous centres are developed and strengthened by exercise, and through them the muscles and different organs of the body, by which means the actions of the whole become much more energetic, the chyme and the chyle more perfectly elaborated, and the processes of nutrition, assimilation, secretion and excretion more perfect. It is obvious, that all these processes must languish when the organic nerves are depressed, either from disease or injury; their action is under such circumstances feeble, and the galvanic currents by no means energetic; and on the contrary, when the nervous centres are highly excited, the actions of the heart and of the lungs are increased, as during febrile paroxysms, and the electric currents are thrown upon the surface of the body, where it excites a sensation of burning heat; under such circumstances, washing the body with weak alkaline solutions would probably prove beneficial, by substracting a portion of the electricity. Some persons are subject to inflammatory affections, and others to diseases of debility; and this is due in a great measure to the greater generation of heat, and consequently of electricity, in the one, than in the other. Some observations of M. le Conne throw light upon this subject; he says, 'the proportion of globules varies much more remarkably in the blood of a healthy person, than that of the albumen; the maximum being 148.450, the minimum 68.349, and the medium 108.399 in 1000 parts of blood. In the lymphatic temperament, the medium quantity is 117.300 among females, and 116.667 in males; in the sanguineous temperament 126.174 in females and 136.497 in males, giving 19.830 more globules to the sanguine temperament in 1000 parts of blood.' As the red globules are the carriers of oxygen, should inflammation be set up in any of the organs or viscera so as to cause a determination of blood to the part, we may at once perceive the reason of inflammation running higher in the one individual than in the other.

It is obvious that these considerations must exercise a weighty influence upon the treatment of various diseases; and should you esteem this paper worthy of a place in your miscellany, at some future time I may trouble you with some considerations on that subject.

LECTURES.

ON THE
EVOLUTION OF LIGHT
FROM
THE LIVING HUMAN SUBJECT.

BY

SIR HENRY MARSH, BART., M. D.

[*Concluded.*]

We have seen that the property of emitting light is enjoyed in a very exalted degree by some aquatic animals; it is not, however, confined to them, many terrestrial beings, some of which crawl on the ground, while others rise on wings in the air, are furnished with organs capable of eliminating light.

The first we shall notice is a small annelidan discovered by George J. Allman, Esq., of this city. We shall copy his own description, from the report of one of the meetings of the Dublin Natural History Society. He says, 'I observed, in the month of September, that some of the turf bogs in the western parts of the county of Cork exhibited by night, on the recent removal of their surface, a great many minute luminous points, presenting almost the appearance of the sea when its waters are agitated during the night. This appearance was very transitory, lasting but for a few seconds after the exposure of the subjacent peat, and requiring for its subsequent manifestation a second removal of the surface. On bringing home some of the luminous peat, and making a careful examination, I found that this interesting phenomenon was caused by a small white worm belonging to the class annelides. The power of emitting the light appeared voluntary, and to require for its manifestation that the little animal should in some way be irritated. On holding one of them over alcohol, an exceedingly brilliant phosphorescence would take place, and last for a few seconds, excited, doubtless, by the irritation of the alcoholic vapor. This phosphorescence consisted in a very beautiful clear green light, and did not appear to be confined to any particular spot, the entire animal appearing equally luminous. I find upon inquiry that the phosphorescence of the bogs is well known to the country people of the western parts of the county of Cork, though, as may be expected, not referred by them to its cause.

The little animal which is the cause of this beautiful phenomenon is a small white annelidan, about half an inch in length, and composed of a number of setigerous rings, very distinct after the animal has become contracted from immersion in spirits. Each ring bears a fasciculus of very minute setæ on either side, requiring, in order to render them visible, a very high magnifying power.

Duges, in a paper published in the eighth volume of the 'Ann. des Sciences Nat.,' second series, describes a luminous annelidan belonging to the same division of the class as that of mine, which he calls lumbricus phosphoreus, and states that he found it in the tan of the hot-houses in the Botanic Garden of Montpelier. The lumbricus phosphoreus of Duges, however, differs in several important points from mine, which I have not as yet been able to identify with any described species. The discovery of this little creature, then, I look upon as not altogether destitute of interest, both because it is the only Irish land animal, with the exception of geophilus electricus, hitherto described as phosphorescent, and because it is the cause of a singularly striking and beautiful phenomenon.'

The light of some centipedes inhabiting the islands of the Pacific is described as being of a beautiful emerald green color; it appears to depend upon a mucous matter covering the animal, which, when rubbed off by the fingers, communicates to them, it is said, a smell resembling that of muriatic acid. Scolopendia electrica is a native of some parts of Britain; but its light is seldom seen, in consequence of the animal inhabiting holes, from which it is not often disturbed during the night. It is very luminous, and when crawling along a pathway, sometimes leaves a track of phosphoric matter that may be lifted. Nine species of lampyris are described as being luminous; of these lampyris noctiluca, the common glow-worm of these countries, exhibits this phenomenon in a very striking manner. The female of this species is remarkable for the beauty and brilliancy of its light; it is of a blueish or greenish white color, and seems to envelop the whole insect; the hour on a watch may be ascertained by it. The luminosity of the male is of a delicate blueish tint, but much more feeble than that of the female. The period of emitting light is confined to one season of the year, and is generally supposed to be connected with the function of propagation.

Another beautiful example of a luminous insect is seen in elater noctilucus, or fire-fly; it is more than an inch in length; under its body is a circular patch, which in the dark shines like a candle; on each side of the pro-thorax, on the dorsal surface, is a prominent globular body, in size larger than a grain of mustard-seed; each of these bodies (thoracid tubercles) is luminous, and emity light like a rising star. The light given out by these insects is so brilliant that, with eight or ten of them, a book may be perused as with a candle. The negroes in the West Indies frequently collect a number of them together in small thin muslin bags, and the light, as from a lantern, is supplied by the hand of Nature.

In Siam, the trees on the banks of the rivers, in the twilight of summer, are splendidly illuminated by swarms of fire-flies, which emit and conceal their light as uniformly as if it resulted from machinery of the most exact and perfect contrivance. Mouflet relates that when Sir Thomas Cavendish and Sir Robert Dudley landed in the West Indies, they saw in the evening an infinite number of moving lights in the woods, which, though nothing more than fire-flies, were mistaken by them for Spaniards advancing to attack them by torch-light, upon which they immediately retired with precipitation to their ships, not daring to risk an engagement at such an hour, and against such unequal numbers. Naturalists enumerate fifteen species of elater, all of which are luminous.*

The lantern-fly, or fulgora laternaria, is a brilliant and beautiful insect; when of full size it is nearly three inches and a half in length, and five and a half from tip to tip of the expanded wings. The body is of a lengthened oval shape, and divided into several rings or segments. The head is nearly equal in length to the rest of the animal. Its general color is a beautiful yellow, here and there strongly tinged with green, and variegated with many bright reddish brown stripes and spots. Its large and yellow wings exhibit all the beauty and variety of color with which nature is so lavish in adorning the birds and insects of warm and tropical climates. It is a native of Surinam, and other parts of South America, and during the night diffuses a light so strong—a phosphoric splendor so luminous—that it can supply the place of torch-light; and a few, it is said, being fastened together, are employed to enlighten the path of the traveller, and guide his footsteps during the darkness of night. Madame Mereau, in her work on the Insects of Surinam, gives a lively picture of the surprise excited in her mind, when first these light-emitting flies burst upon her view. 'The Indians once brought me,' she says, 'before I knew they shone at night, a number of these lantern-flies, which I shut up in a wooden box. In the night they made such a noise that I awoke in a fright, and ordered a light to be brought, not knowing whence the noise proceeded. As we found it came from the box we opened it, but were still much more alarmed, and let it fall to the ground in a fright, at seeing a flame of fire come out of it; and as many animals as came out, so many flames of fire appeared. When we found this to be the case we recovered from our fright, and again collected the insects, highly admiring their beautiful appearance.' Dr. Macartney says, 'The light in this genus (fulgora) has been observed to issue from the remarkable proboscis on the fore part of the head. This part has always been described by authors to be hollow, or empty, which I have found to be perfectly correct; and, what is still more extraordinary, that the cavity communicates freely with the external air, by means of a chink or narrow aperture placed at each side of the root of the proboscis. Fulgora candelaria, pyrrhorhyncus, and serrata likewise possess the property of emitting light; it has also been observed in other genera of the same class, as bupestris ocellata, chiroscelis bifenestrata, scarabæus phosphoricus, and pausus sphœrocerus.†

Limox noctilucus, one of the gasteropodous mollusca, described by M. Orbigny, produces a phosphorescent secretion capable of emitting a light of considerable brilliancy. 'The luminous organ is a small disc of greenish color by daylight, soft in texture and slightly contractile. The light is only visible when the creature is expanded and in motion. The disc is always covered with a greenish mucus, which, if wiped off, is speedily renewed. It is found to be connected with the generative organs, and appears to be principally useful during the season of love.'

Numerous have been the theories advanced by philosophers to explain the nature of the luminous matter which gives rise to the phenomena detailed above, as manifested by living animals; many of them, however, have fallen to the ground under the accumulation of facts and the advancement of science. Beccaria, Mayer, &c., supposed that light is imbibed from the sun's rays by luminous animals, during the day, and given out in the dark; while Brugnatelle thought that light is swallowed with the food and disengaged by peculiar organs. From experiments made with a voltaic current on the luminous organ of the lampyris, Becquerel draws the following inference:—'That phosphorescence in animals, particularly in the lampyris, in whom it manifests itself with brilliancy, is the result of a chemical action, which the will of the animal controls and guides, inasmuch as it possess the faculty of diminishing it insensibly, even to the point of causing it to disappear altogether.' The opinion of Darwin, in which he was supported by H. Davy, Treviranus, and others, was, that a fluid containing phosphorus is secreted by the luminous organs, and shines on its being exposed to the oxygen of the air introduced by respiration.

Macartney and Todd believe that the luminous organs concentrate and modify the nervous influence so as to form it into light, so that, according to their theory, animal luminousness is an effect *solely* of *vital* power.

Tiedemann, in his 'Comparative Physiology,' thus expresses his opinion:—'Animal luminousness would seem to depend on a matter, the product of the changes of composition accompanying life, and, to all appearance, secreted from the mass of humors by particular organs. This liquid probably contains phosphorus or an analogous combustible substance, which combines with the oxygen of the air or of aërated water at a medium temperature, and thus produces the disengagement of light. The preparation and secretion of this substance are acts of life, which change, augment, or decrease by the influence of external stimulants, whose action on the animals modifies their manifestations of life. But the phosphorescence itself depends on the composition of the secreted matter, and cannot be regarded as a vital act; because, on certain occasions, it continues for whole days, and even after the death of the animal.'

Dr. Coldstream believes (with Macartney and Todd) 'that in many, perhaps in all luminous animals, both terrestrial and marine, the light emitted is the consequence of an evolution of an imponderable agent by the nervous systems of the animals, just as the electrical fishes give their shock without the interposition of any visible or ponderable secretion. In this view we may regard the luminous organs as playing the same part in relation to the evolution of light as the electrical organs of the torpedo do to the production of the shock. The single fact of luminousness continuing in the organs or in their effused fluids, after they have been removed from the body of the animal, seems to point to a great difference existing between the two classes of phenomena which we have just compared, in certain animals—namely, when the phosphorescence continues after death, and when, as in some delicate acalephæ, the brightest radiance is emitted in momentary fitful flashes. But it may be that the difference is more apparent than real; for this fact may be explained by supposing that a phosphoric substance really does enter into the composition of the light-giving organs; and yet we may with great probability conjecture that *it* is not the *chief* agent in causing the phenomena of luminousness.*

With respect to the uses of this remarkable property little is known with any degree of certainty. In insects it has been supposed by most observers to be connected with and subservient to the function of reproduction. Others have conjectured that the light may in some instances be a means of defence; and Macculloch has suggested that in marine animals it may be a substitute for the light of the sun in the depths of the ocean.

The prosecution of my subject leads me briefly to allude to a luminous appearance of a wholly different nature and origin, which has been observed in the eyes of some animals, both predacious and herbivorous; in an obscure light they shine brilliantly. The light thus seen is caused by a mirror or reflector placed in the posterior part of the eye; this is called the tapetum lucidum. The inner villous coat of the choroid, which in man is covered with the black pigment, exhibits in several animals a brilliant color and a metallic lustre; this portion of the choroid is the tapetum. It is a peculiar condition of the surface of the choroid, by means of which rays of light are reflected. It presents the form of a large irregular patch placed at the bottom of the eye, outside the entrance of the optic nerve. It is of a beautiful blue, green, or yellow color, with splendid metallic lustre, and sometimes white as silver. It is not obscured by the black pigment which covers the rest of the surface. It acts as a perfect concave reflector, causing the rays of light, previously concentrated on the bottom of the eye, to be reflected, and thus produces the remarkable luminous appearance observed in the eyes of cats and other animals when seen in obscure situations. This provision is absent in man, the quadrumanous animals, bats, the insectivorous order, perhaps all the rodentia, the sloths, and many other of the class mammalia, while it is present in the majority if not all of the ruminants, as well as in the horse, the cetacea, and most of the carnivorous tribe. It does not appear to exist in birds or reptiles, and is absent in the osseous, although present in the cartilaginous fishes.*

---

* Cyclop. Anat. and Phys., Art. Animal Luminousness.
† Ibid.

* Cyclop. Anat. and Phys., Art. Animal Luminousness.

The eyes of a concealed tiger, like balls of fire, glaring on the object destined for its prey, unexpectedly encountered in an Indian jungle, in the obscurity of approaching night, have caused, and are sufficient to cause, the stoutest heart to quail. The luminous appearance of the eye in animals provided with the tapetum, is sufficiently accounted for by the reflection of light caused by this natural mirror. But there is a brilliancy of the eyes, caused by vehement mental emotions, which this will not account for. When an animal is furiously impelled by rage, lust, or famine, the eyes appear to glisten. What can be the cause of this? What gives this peculiar expression to the eye? Homer, always true to nature, has not omitted to portray this, in describing his hero Achilles rushing to battle.

> 'Grief and revenge his furious heart inspire;
> His glowing eyeballs roll with living fire.'

Shakspeare, too, one of the most accurate delineators of the passions that ever existed, when drawing a picture of intense hatred, makes one of his characters exclaim,

> 'Mine eyes should sparkle like the beaten flint.'

In particular states of the atmosphere, the hair of many animals, under the influence of friction, emits abundantly electric sparks with a crepitating sound. This phenomenon may be observed in the domestic cat, and even human hair has been described as emitting electric sparks when briskly rubbed or brushed.

It has also been asserted that electric sparks, accompanied with a crackling noise, have been seen to issue from the skin of some individuals when rubbed lightly and quickly with a linen cloth. An instance is related by an Italian physician of a lady of Verona, from whose limbs 'sparks of fire flew out plentifully as often as they were lightly rubbed with linen.' He adds, that 'oftentimes having rubbed her hands upon her sleeve, she observed a flame running about, as fired exhalations are wont to do.'

According to the same writer, similar phenomena were observed on the person of a bookseller at Pisa, when the skin of his arms and back was rubbed with linen.

Having now briefly referred to some of the most striking instances of luminousness throughout the extended range of inorganic and organic matter, it remains for me to state the very remarkable facts which form the chief object of this communication. The luminous appearance I am about to describe was observed only when disease had made deep ravages in the system. It is the following:—

'It was ten day's previous to L. A.'s death that I first observed a very extraordinary light, which seemed darting about the face, and illuminating all around her head, flashing very much like an Aurora Borealis. She was in a deep decline, and had that day been seized with suffocation, which teazed her much for an hour, and made her so nervous that she would not suffer me to leave her for a moment, that I might raise her up quickly in case of a return of this painful sensation. After she settled for the night I lay down beside her, and it was then this luminous appearance suddenly commenced. Her maid was sitting up beside the bed, and I whispered to her to shade the light, as it would awaken Louisa. She told me the light was perfectly shaded. I then said, 'What can this light be which is flashing on Miss Louisa's face?' The maid looked very mysterious, and informed me she had seen that light before, and it was from no candle. I then inquired when she had perceived it; she said that morning, and it had dazzled her eyes, but she had said nothing about it, as ladies always considered servants superstitious. However, after watching it myself half an hour, I got up and saw that the candle was in a position from which this peculiar light could not have come, nor, indeed, was it like that sort of light; it was more silvery, like the reflection of moonlight on water. I watched it for more than an hour, when it disappeared. It gave the face the look of being *painted white* and *highly glazed*, but it danced about and had a very extraordinary effect. Three nights after, the maid being ill, I sat up all night, and again I saw this luminous appearance, when there was no candle nor moon, nor, in fact, any visible means of producing it. Her sister came into the room and saw it also. The evening before L. A. died I saw the light again, but it was fainter, and lasted but about twenty minutes. The state of body of the patient was that of extreme exhaustion. For two months she had never even sat up in the bed. Many of her symptoms varied much from those of other sufferers in pulmonary complaints whom I had seen, but the general outline was the same. Her breath had a very peculiar smell, which made me suppose there might be some decomposition going forward.'

The fact is certain, the source whence derived authentic, the circumstantial detail clear and conclusive. The person from whom I derived the knowledge of this interesting fact is one of a clear head, superior power of observation, and utterly exempt from the distortions and exaggerations of superstition. The young lady about whose person these luminous appearances were manifested, I had seen several times before her return to the country; her lungs were extensively diseased; she labored under the most hopeless form of pulmonary consumption.

Extraordinary as the foregoing case may appear, it is not without parallel. A few months since I was in attendance upon a young lady who was in the last stage of pulmonary consumption. She had read in the newspapers a brief notice of a communication which I had, a short time previously, brought before the College of Physicians, upon the evolution of light in the living human subject, and feeling deeply interested in so remarkable a phenomenon, had, more than once during my visits, directed her conversation to that subject. It is no less remarkable that she should, in her own person, have subsequently exhibited similar phenomena. The following statement I received from her sister:—

'About an hour and a half before my dear sister's death, we were struck by a luminous appearance proceeding from her head in a diagonal direction. She was at the time in a half recumbent position, and perfectly tranquil. The light was pale as the moon, but quite evident to mamma, myself, and sister, who were watching over her at the time. One of us at first thought it was lightning, till shortly after we fancied we perceived a sort of tremulous glimmer playing round the head of the bed; and then recollecting we had read something of a similar nature having been observed previous to dissolution, we had candles brought into the room, fearing our dear sister would perceive it, and that it might disturb the tranquillity of her last moments.'

An appearance of the same kind has been observed round the person and in the room of a man who fell a sacrifice to lingering disease in a remote part of the south-west of Ireland. All the witnesses agree in having seen the light, many, however, have come to the conclusion that it was altogether a supernatural appearance. Would it not be well if those educated persons who have persuaded themselves that such luminous appearances in the room, and around the person of a dying man, must of necessity be a miraculous interposition—would it not be well if those persons would pause for a moment and consider, first, whether these phenomena may not have a ready solution by reference to the established and known laws of nature; and whether, in the second place, revealed truth be not founded on a basis too firm to need, and whether it would not rather repudiate, the aid of supposed miracles, the meaning and object of which it would be no easy task to comprehend. Many of the accounts I have received of this case have been written under the firm persuasion that the light seen arose not from natural, but from supernatural causes. It is certain, however, that a luminous appearance in this instance has been by many distinctly and repeatedly observed. I have been informed by my friend Dr. Bull, who resides in Cork, that several of his acquaintance, on the truth of whose statements he could rely, went for the purpose, and saw distinctly the luminous appearances which had excited such general attention in the south of Ireland. An authentic report of this interesting phenomenon having been subsequently published by Dr. Daniel Donovan in the 'Dublin Medical Press,' January 15, 1840, I shall extract from his statement the most important particulars of the case. The name of the patient was Harrington, and he resided in a small but populous village on the harbor of Glandore, one of the most picturesque spots on the southern coast of Ireland. Dr. Donovan states, 'I was sent for in December, 1828, to see Harrington; he had been under the care of my predecessor, and had been entered in the dispensary book as a phthisical patient, and on reference to my note-book, I find that the stethoscopic and other indications of phthisis were indubitable. He was under my care for about five years, during which time, strange to say, the symptoms continued stationary, and I had discontinued my attendance for about two years when the report became general that mysterious lights were every night seen in his cabin. The subject attracted a great deal of attention, and, like every thing else in Ireland, at once assumed a sectarian complexion; some attributing the lights to the miraculous interposition of heaven, others to the practice of the black art. Not regarding these views as offering any explanation of the mystery, I determined to subject the matter to the ordeal of my own senses, and for this purpose visited the cabin for fourteen nights, and on three nights only did I witness anything unusual; once I perceived a luminous fog resembling the Aurora Borealis; and twice I saw scintillations, like the sparkling phosphorescence some times exhibited by the sea infusoria. From the close scrutiny I made, I can with certainty say that no imposition was either employed or attempted.' Dr. Donovan adds, 'I am of opinion that the appearances which I witnessed were dependent on the presence of phosphorescent matter in the expiratory and perspiratory secretions. The property which phosphuretted hydrogen has of undergoing spontaneous ignition when brought into contact with atmospheric air is well known; and as the components of which this is made up exist in abundance in the human body, it is not outstretching the bounds of probability to suppose that it is sometimes generated in the living system.'

---

* Cyclop. Anat., Art. Eye.

Dr. Donovan has lately informed me that the luminous appearances were not any time visible to him on the person of the patient; the scintillations which he has described above were perceptible immediately over the head of his bed on a wall composed of stone and clay mortar. The luminous fogs passed in streams through the apartment in which the sick man lay, and on one occasion Dr. Donovan fancied that he saw a meteor, like a falling star, suddenly pass through the house. Appearances of a similar nature are said to have been seen about the person of a woman named Pallister, who died some time ago in the neighborhood of Hull; but I have not been able to procure any well authenticated report of the phenomena.

For the following very interesting and important fact, I am indebted to my friend Dr. William Stokes: 'When I was residing in the Old Meath Hospital, a poor woman laboring under an enormous cancer of the breast was admitted. The breast was much enlarged, and presented a vast ulcer with irregular and everted edges, from all parts of which a quantity of luminous fluid was constantly poured out.—Upon being asked whether she suffered much pain, she answered 'Not now, Sir, but I cannot sleep watching this sore, which is on fire every night.' I directed that she should send for me whenever she perceived the luminous appearance, and on that night I was summoned between ten and eleven o'clock. The lights in the ward having been then extinguished, she was sitting leaning forward, the left hand supporting the tumor, while with the right she every now and then lifted up the coverings of the ulcer to gaze on this, to her, supernatural appearance. The whole of the base and edges of the cavity phosphoresced in the strongest manner. The light was steady. I directed that the ulcer should remain open, while I retreated gradually, keeping my eyes fixed on the light, which I found distinctly visible at the end of the ward, which must have been more than twenty feet from her bed. The light within a few inches of the ulcer was sufficient so enable me to distinguish the figures on a watch dial. I have no very distinct recollection of the color of the light, but I remember that its intensity was variable, it being on some nights much stronger than on others.' Can it be that the soft halo of light, thrown around the head by the ancient masters in Scripture paintings, owes its origin to this appearance observed, but never recorded?

Of all the enumerated sources of phosphorescence in bodies inorganic or organic, to which do the facts now detailed bear the strongest and closest analogy? Decidedly, I think, to the phosphorescence generated in organic bodies at the very moment of incipient decomposition. But it will be said 'Can such a state of things exist? Can any process analogous to decay take place in the human frame, whilst yet the living principle remains?' Unquestionably it may be. For what, after all, is disease? Is it not the first step made toward dissolution? Does it not imply that to a certain extent, however slight that may be, the vital property is impaired and altered, and that unless combatted by art, and stayed in its progress by the restorative power implanted in the living system, it will inevitably lead to that condition which gives to the chemical actions the ultimate mastery over the vital?

Will not this partially impaired power of vital action help to explain the cause of many of those extraordinary solid compounds and fluid secretions which during the process of disease are developed? May not a portion of the living frame be undergoing disintegration, while yet the vital functions, though with impaired energy, maintain their controlling influence over the remainder? I doubt it not, and I do believe, that while the flame of life still flickeringly burns on, the diseased or injured part may be reduced to that state which in an animal matter is perfectly analogous to the first and earliest stage of decomposition; and, other conditions existing, light may be evolved precisely in the same manner as this phenomenon is produced in the dissecting-room, in burial grounds, and in marine animals during the early stage of decay. It is not improbable, then, that all the cases of phosphorescence or luminousness to which we have referred may be reduced to one common head—to chemical actions in peculiar conditions evolving light through the instrumentality of electrical phenomena.

Hitherto few instances of phosphorescence in the higher animals have been observed, or at least recorded; no doubt a luminous appearance has been observed in the renal secretion, and in the ova of lizards, but the evolution of light from the living bodies of the higher animals has generally escaped observation. Between the facts now recorded, and the state of the body when *spontaneous combustion* takes place, there is a very striking analogy. In one case of spontaneous combustion which is related on good authority, from the person who suffered from this mysterious, and as we may justly call it, dreadful disease, a lambent flame was distinctly seen to issue; this was observed while the patient was still alive, for he lived for four days after the occurrence of the spontaneous combustion, and was able to give an accurate account of his earliest sensations. This is an important fact, and bears directly on the subject we are discussing; before internal combustion can take place, the vital property must have nearly lost its controlling influence, as already explained, and chemical action before death, must have begun to predominate. This explanation is corroborated by another case, the details of which have been published. It is the fact of the disengagement of a gas throughout every part of the body, which became universally emphysematous; on making an incision into any part the gas escaped, which, when touched with the flame of a candle, ignited and burned with a blueish flame.

I should gladly enter upon, and detail the various recorded instances of spontaneous combustion, but it would occupy time too largely; nor is it necessary, as I can refer my hearers to an excellent and truly scientific paper on this subject written by Dr. Apjohn, and published in the 'Cyclopædia of Medicine.'

It appears to me in the highest degree probable that, were accurate observations made, a luminous appearance would always be discovered around or upon the persons of those in whom spontaneous combustion was taking place.

I shall conclude by describing an experiment of considerable interest, as connected with our subject which was, I believe, first performed by Magendie, and which has been lately repeated under my own inspection.

Half an ounce of olive oil, in which two grains of phosphorous were dissolved, was injected into the crural vein of a dog. Before the syringe was completely emptied, a dense white vapor began to issue from the nostrils, which became faintly luminous on the removal of the lights. An additional half ounce of phosphorated oil, of equal strength, was then injected, and the lights extinguished.—The expirations immediately became beautifully luminous, resembling jets of pale colored flame pouring forth from the nostrils of the animal.—This extraordinary spectacle continued until the death of the dog, which occurred in about five minutes. In this experiment the rapid transit of the injected fluid from the vein in the remote extremity to the lungs, and its instantaneous expiration in the gaseous form, were very remarkable. The result of the experiment would also seem to show that in some, at least, of the instances of luminous appearances referred to, the presence of phosphorus formed an element in the production of the effect.

The subject of the evolution of light from the living human subject is one which it must be conceded, is of rare interest; it remains open for investigation, and will, I hope, be further and successfully prosecuted.—*Prov. Med. Jour.*

Desertion of Children.

In large manufacturing districts, and among the artisans, the parents separate themselves from their children, with a most lamentable carelessness, and look on it as infinitely more convenient and desirable to take their children to a hospice, and to forget them, than to trouble themselves about bringing them up. M. Lelong, a member of the general council of the Seine Inferieure, states that in some neighborhoods the number of foundlings has equalled, and sometimes even exceeded, the number of children born out of wedlock. At the Hotel Dieu, at Lyons, there is a lying-in ward for the wives of the artisans, in which from 500 to 600 are delivered annually. More than 60 of these women are detected every year by the vigilance of the police, in their attempt to send their children to the hospice, and are compelled to take them back again. Many elude the officers, and succeed in getting rid of their children. 2,000 are admitted every year into the foundling hospital at Lyons, and of these 400 are considered to be legitimate. During the twenty years from 1816 to 1835, 57,400 women have been delivered in the Maternité, at Paris, and 19 20ths of them sent their children to the Hospice des Enfans trouvés.—*Brit. and For. Med. Rev.*

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, December 17, 1842.

We fully believe that the great body of the medical profession in this city and State have long been impressed with the necessity of some measures of reform, which shall have for their object, the elevation of its character in public estimation, which is now low beyond all precedent, and the elevation of the standard of medical acquirement. It is this belief that sustains us in our frequent appeals for medical reform. The meeting of the Medical Society of this State, which will convene in Albany on the first Tuesday of February next, appears to us to present a favorable opportunity for the commencement of this great work, and we would respectfully venture to suggest a mode of procedure, which while it commends itself to the unbiassed judgment of the profession, compromises no right, and infringes no privilege, of any individual engaged in the business of teaching.

The first step must be an appeal to the Medical Society, by way of memorial, setting forth in as comprehensive terms as possible, the actual condition of the medical profession in this State; the causes of this condition, and its probable prospects if measures be not speedily taken to improve it. Secondly: The suggestion of the most effective and feasible means, and at the same time the least expensive which promise to be attended with success. Thirdly: An earnest request, that in its corporate character, it will apply to the Legislature, for the passage of an act which will enable it to carry out and enforce the amendments, which in its discretion it may adopt, by giving to them the sanction of a public law. It is not necessary to ask the legislature to accord to the Medical Society any right, which it is the interest of the public to withhold, and if they ask aright, the Legislature will require no more time to act, than will be necessary to a full understanding of the merits of the petition. It seems to be necessary, nay it is indispensable, that the right to license physicians should be restricted to a board of examiners, who have no interest in teaching: the diplomas of medical colleges should be academic honors only, and confer no special priviledge to practice physic or surgery. The pupil ought to be permitted to acquire his education where, and of whom he pleases, provided only, that his term of study be sufficiently extended to warrant the expectation that he has had full opportunity. The law now requires that this term shall be four years, but permits a rebate of time on certain conditions, (which, by the way, is one of its defects,) but as he would be required to stand on his qualifications before a board of examiners, who from the nature of their appointment must be unprejudiced and impartial, there would be little reason to fear that unqualified candidates would present themselves. There are few persons who have given any attention to this subject, who do not approve of this feature in any new enactment; but many apprehend difficulty in procuring the requisite number of qualified men to constitute this board of examiners, who might be required to repair to Albany at least twice in each year upon their own charges: and others ask, with apparent concern, who shall appoint them? We will, in few words, endeavor to answer both objections. In the first place, the board can be and ought to be chosen by the Medical Society, and it should be made up of physicians and surgeons selected from different and perhaps distant districts of the State. It ought to be a large board, to consist, when full, of at least seventeen persons, so that the quorum for the dispatch of business might be large also, and the time occupied in the performance of this duty, as well as their actual travelling charges, should be reimbursed by the candidates, who would in no event be obliged to pay more for the diploma so obtained than is exacted from them now by the several medical colleges. The fees thus paid, would constitute a fund amply sufficient to remunerate their expenses, and permit them each to receive as much as the per diem allowance now paid to our members of Congress, during the time they were engaged in the business of examination. The advantages of this, or some similar plan of licensing physicians in this State, would soon be apparent. It would work a revolution in college tactics; the admission ticket to lectures, would have no weight, unless its value or something like it, had been received by its owner; and of this fact, intelligent strangers would be the judges; and it would cut up by the roots the monopolies of private teaching, which is now almost exclusively confined to the offices of the public teachers who are professors in our medical colleges.

The Medical Society of this State is not only a highly respectable, but a very effective body of men, whenever it pleases to exert its influence; it consists of delegates from every county in the State where there exists a medical society, and it is presumed that it represents the views and wishes of the whole profession, on every question which has a public relation: when full, it may number seventy or eighty persons, as each medical society sends a delegate—the medical colleges each send a delegate, and the permanent members, two of whom may be and are elected every year, will, on all interesting occasions, attend, particularly if they reside in Albany or its immediate neighborhood. To this body, thus constituted, it is fair to presume that both the medical profession and the public might safely confide all medical interests. The election of this board of examination ought to be by ballot; and after the first year, provision should be made by law, that they should be proposed to the society for the office of examiners twelve months before the time of election, in order that the members may have full time to canvas their qualifications. One third of the number ought to retire every year; and for this purpose, at the first meeting of the board, the number are to be cast by lot into classes, as are the senators of this State. By this arrangement, the board would always have among its members, some of the most modern scholars, who would bring, among their qualifications in aid of their duty, the progressive improvements of the sciences of physic and surgery. A board of examiners thus constituted, would, in a short time, change the entire character of the medical profession; pupils, constrained to stand on their acquirements, and nothing else, would be obliged to become, in the literal sense of the word, *students*, before they became practitioners; their diplomas would be the evidence of their deserts as well as testimonials of their pupilage; and a permanent distinction would thus be established between the mere tradesman in physic, and the high-minded and intelligent physician; the latter of whom is always obliged to break through the restraints which the discipline of his education has imposed, before he can offend against the good morals or good manners of the society of which he is a member. Quacks, mountebanks, and nostrum-mongers are never found among the well-educated classes of physicians, unless temptation, in some oppressive form, has previously broken down the morals of the delinquent—those morals which are the only conservatives of medical character, and which ought to be as much a branch of his education as the structure of the human body, its physiology, its pathology, or the knowledge of remedial agents.

The education of physicians, we know is now lamentably deficient; the multiplication of medical schools and colleges has increased their number beyond the demand, and has operated to depress and debase the standard of medical acquirement in proportion to the numbers graduated; and it would seem to be high time to improve the stock, even at the expense of thinning the ranks of the profession; and a plan similar to this in principle, however varied in its details, promises to do more to improve its character, than any other yet suggested. With an independent board of examination in this State, to which all candidates for medical license must submit, before they can acquire rights to practice, no harm would result if schools were as numerous as its counties, and the teachers as multitudinous as district schoolmasters.

We have heard with great satisfaction that a splendid edition of Pereira's celebrated work on Materia Medica, will shortly be published by Messrs. Lea & Blanchard. Professor CARSON, of the Philadelphia College of Pharmacy, is the Editor. Upwards of three hundred wood-engravings will be given in this edition, together with many valuable additions to the original text.

Elements of Physiology. By J. MULLER, M. D., Professor of Anatomy and Physiology in the University of Berlin, &c. Translated from the German by WM. BALY, M. D. Arranged from the Second London Edition. By JOHN BELL, M. D., Lecturer on Materia Medica and Therapeutics, and formerly on the Institutes of Medicine and Medical Jurisprudence, &c. Philadelphia: Lea & Blanchard. 1843. 8vo. pp. 886.

This admirable abridgement supplies a want which has been long regretted. The great work of Müller has hitherto been a sealed book to the student, and in fact also to the practitioner. And yet where is the other treatise on physiology, which contains such a vast amount of carefully elaborated and instructive matter? But the original dimensions of these 'Elements' are so extended, that ordinary readers cannot be expected to enter on their examination. The publishers of the volume now before us, are therefore justly entitled to the thanks of the numerous class of readers to whom they have opened up a new and most profitable field of study.

When we saw the announcement that to Dr. BELL had been entrusted the task of abridging and arranging the work of Müller, we anticipated the production of a serviceable volume, and we have now sufficient evidence that our confidence was not misplaced. Although an abridgement of Müller, this work may rightfully claim to be considered a complete system of physiology, exceeding in copiousness and comprehensive details, any other treatise on the same important science, which has ever emanated from the press. Whilst the sound judgment of the Editor has excluded the lengthened disquisitions, labored expression of mere individual opinion, and extraneous matter which properly belongs to other departments of science, all that is really of practical utility is carefully preserved, and some of it arranged in more natural order than in the original. Several notes and additions by the Editor are inserted, and with those by the accomplished translator, serve materially to illustrate, explain, and corroborate the text.

We cannot at present do more than make this announcement of the publication of the work, but we will hereafter find opportunities of introducing it more particularly to the notice not only of the profession, but of the general reader. In the meantime we commend the volume to the favorable attention of all who desire to possess a treatise on Physiology, which fully comes up to the standard of our present knowledge of the science.

A Treatise on the Diseases of the Eye. By W. LAWRENCE, F. R. S, Surgeon Extraordinary to the Queen; Surgeon to St. Bartholomew's Hospital, and Lecturer on Surgery at that Hospital, &c. &c. From the last London Edition. With numerous additions, and sixty-seven illustrations. By ISAAC HAYS, M. D., Surgeon to Will's Hospital, &c. &c. Philadelphia: Lea & Blanchard. 1843. 8vo. pp. 778.

This is another magnificent work from the prolific press of the enterprising firm to whom the profession in this country have been so repeatedly indebted for new and valuable books. We think there are few medical works which could be so generally acceptable as this one will be to the profession on this side of the Atlantic. Ophthalmic surgery and medicine have been too much neglected here. The want of a scientific and comprehensive treatise on Diseases of the Eye, has been much deplored. That want is now well supplied. The reputation of Mr. Lawrence as an oculist, has been long since fully established. His treatise is fairly entitled to claim rank with that by Dr. Mackenzie, and that is no small encomium. Lawrence's great merit consists in the clearness of his style, and the very practical tenor of his whole work. The value of the present beautiful edition is greatly enhanced by the important additions made by the Editor, as all who are acquainted with his distinguished attainments in this branch of science, will readily imagine. Dr. HAYS has for nearly a quarter of a century been connected with public institutions for the treatment of diseases of the eye, and few men have made better improvement than he has of such extensive opportunities of acquiring a thorough knowledge of the subject. In the Editor's additions we have noticed a few grammatical errors, such as that in the following sentence:—'The results of our experience with strychnine in amaurosis, are much more favorable to the value of this remedy, than those of Mr. Lawrence and Mr. Tyrrell.' But it is hardly fair to advert to such trifles.

The wood-cuts are executed with great accuracy and beauty, and many of them are original. Of the paper and typography it is only necessary to state that they are worthy of the press from which the volume has been issued. No man who pretends to treat diseases of the eye, should be without this work. We sincerely trust that it will soon occupy a place in the library of every respectable member of the profession throughout the Union.

THE MEDICO-CHIRURGICAL REPORTER.

Crosby Street College Surgical Clinique.

December 10*th*, 1842.

1. *Nævus Maternus, or Aneurism by Anastomoses.*—The patient, a child of two years of age—the nævus maternus occurring over the os frontis, just above the right superciliary ridge; most disposed to the arterial complexion; circular and slightly elevated. At the time of its birth, but a small speck or spot was observed, and from that time it had been gradually growing larger and increasing in redness, till a short period since. Inoculation was first resorted to, which, if not successful, the introduction of hot needles, ligation, or excision would be the proper treatment. At the Clinique of last week, a nævus maternus was excised, occurring over the dorsal vertebræ; it however, was of a venous character, and was not followed by much hæmorrhage.

2. A negro man, thirty years of age: general health bad; swimming and dizziness in the head on getting up in the morning; restless nights; pulse 70; appetite not good; bowels costive; swelling of the legs; cough at night, with an abscess on the breast, involving the lower portion of the body of the sternum, and enlargement of the lymphatic glands in the neck. The patient of a very decided strumous diathesis; fluctuation of the tumor distinctly detected, and most probably indicates necroses, or rather caries of the bone. The treatment was to correct the general health. Emetics would most likely be serviceable, and after that, attention to the local difficulty.

3. A woman, aged twenty-five: tumor or swelling of the leg, with considerable pain, extending along the thighs and back, more particularly on afternoons and evenings on going to bed; also pain in the shoulder and arm. This was a case of inflammation of the fibrous tissue; the periosteum was involved, and there was beside caries to some extent of the fibula. Rest was enjoined; the abscess, when arrived at the proper stage, to be opened, and the pus discharged.

4. A negro woman, aged thirty—occupation that of a washerwoman: about four weeks since, while washing some underdresses, discovered stains on the linen; a few days afterwards there was violent inflammation and intense pain in the middle finger of the left hand; the inflammation was allowed to go on, until it resulted in ulceration and sloughing of the finger, exposing the first and a portion of the second phalangeal bones. The diagnosis here was whether the exciting cause was gonorrhœal or syphilitic. However, the ulcer presented none of the symptoms or character of the latter, having a healthy granulatory aspect, instead of the peculiar grayish and pathognomonic appearance which indicates the syphilitic sore. The patient had received a slight puncture or abrasion at the apex of the finger, and by this means the virus was introduced and became inoculated. The treatment, at the present stage of the inflammation, merely amounted to dressing of the basilicon ointment and bandaging.

5. A case of compound fracture of the nasal bone, extending to the naso-frontal suture: exfoliated portions of bone had been thrown off, and exfoliation was taking place in other portions of the bone. All that was indicated here was simply dressing the part, so as to protect it from exposure and prevent inflammation.

6. *Gonorrhœa.*—Treatment. Rest; to keep perfectly still and quiet; unirritating diet; injections with a solution of the nitrate of silver, and flax seed tea; the penis should be wrapped in cold wet cloths, and make use of some purgative.

7. *Swelled Testicle*—brought on by exposure and fatigue; resulting in inflammation of the scrotum: ulceration had taken place to some considerable extent, and the two coats, the tunica albuginea and tunica vaginalis, had become united and adhered, from the result of inflammation. Strapping with the adhesive plaster, bandaging, and stimulating applications were ordered.

8. Patient aged thirty-five; feet swollen, accompanied with pain and weakness in the joints; occupation that of an engineer on board of a steamboat; general health not good; had an attack of acute rheumatism about a year ago, brought on by the sudden changes of his occupation, the attack being nothing more than an inflammation of the fibrous tissue about the joints. Treatment:—shower bath and friction; colchicum and cicuta; taking care to be removed from the exciting cause.

9. *Operation for Club-foot.*—The double varus.

10. *Herpes Iris.*—Very rare disease, occurring in this instance on the dorsum and palm of the hand and fingers. Mild purgatives are prescribed.

11. *Operation for Strabismus*—Successful.

12. *Fracture of the Head near the right fronto parietal suture.*—The patient, a negro, fifty years of age. Simple fracture treatment, to prevent inflammation.

Albany Medical College.

DR. MARCH'S SURGICAL CLINIQUE, DEC. 3.

1. Child of Mr. J. N., æt. 7, with irritable ulcer of the tongue and mucous membrane of the right cheek. Nit: arg: was applied locally, and calomel and pulv: Dov: ordered in alternate doses.

2. Mr. C. McC., æt. 22, of Waterlo, who appeared at the last clinique with congestion of the retina of the right eye, causing partial loss of vision, and attended with deep seated pain. Under the treatment adopted a very decided improvement has taken place. The pain has disappeared, and the power of vision has been almost completely restored.

3. A. F., æt. 9, upon whom the operation for strabismus was performed at the last clinique. This operation has been perfectly successful, and vision, which had previously been dim, is now much improved.

4. Miss J. D., æt. 15, with irregular contraction of the flexor muscles of the right fore-arm and hand. Graduated compresses and a splint were applied.

5. P. T., æt. 10, with a scrofulous ulcer on the right side of the neck of twelve months' standing. A small portion of the ulcer, which presented a fimbriated appearance, was removed. A small abscess near the ulcer was opened, and its contents evacuated. Nit: arg: was applied to the ulcer, and the wounds dressed with lint and adhesive straps.

6. Miss L. C., æt. 15, on whom the operation for strabismus was performed at the previous clinique. A compress and roller were applied to correct a slight protrusion of the affected eye.

7. C. L., æt. 7, of West Troy, with enlarged tonsils, which were removed.

8. Miss J. L., æt. 17, of West Troy, with enlarged tonsils, which were removed.

9. Miss M. C., æt. 16, of Greenbush, who appeared at the previous cliniques, with necrosis of the tibia. The ulcer, which is in a healthy condition, was dressed with pulv: sang:, dry lint, and a roller.

10. Mr. M. C., æt. 30, with an irritable ulcer on the back of the right hand. Alterative medicines were ordered.

11. Mrs J. F., æt. 66, with gastrodynia of five years' standing.

12. M. E. L., æt. 11. The operation for strabismus was successfully performed on this patient.

13. Child of Mrs. M. C., æt. 9 months. This was a case of congenital talipes varus of both feet. The heel was raised, the inner edge of the foot drawn upwards, and the whole foot drawn inwards. The operation for the cure of this deformity was performed by Dr. M. The tendo-Achillis was put upon the stretch, a narrow sharp-pointed knife passed under it, and the tendon divided by cutting outward as the knife was withdrawn; a single drop of blood followed the operation. A footboard adapted to counteract the threefold distortion, compresses, and a roller, were then applied. It was proposed to operate upon the other foot at some future time.

14. Mr. J. B., æt. 30. It was stated by Professor Hun, that the patient had always enjoyed good health until last April, when he had a severe attack of pleurisy of the right side, which confined him to bed for several months. About the beginning of July, a swelling was observed on the right side just below the nipple, which was opened by his attending physician, and a pint and a half of pus was discharged. The opening remained, and has discharged pus up to the present time. The discharge is now about a gill per diem, but a few weeks ago was more considerable. A probe passed into the opening enters about two inches upwards and inwards, passing under the rib. The pulse is quick and feeble; he is greatly emaciated; his appetite and digestion are good. On percussion, by Professor Hun, the right side gave a flat sound in its whole extent, anteriorly and posteriorly. The respiratory murmur is absent on that side. On the left side, the sound on percussion is clear, and the respiratory murmur is loud, mixed with some friction sound towards the base. From these symptoms it was inferred that there was a purulent effusion into the cavity of the pleura, which has made its way externally and discharged by the opening. The different directions which purulent effusion into the pleura might take, were fully explained by Professor Hun.

15. Mr. P. D., æt. 35, with unreduced fracture of the ulna, and dislocation of the head of the radius, which took place a year ago. This case presented exostosis of the ulna, with numbness of the hand arising from compression of the ulnar nerve.

16. Mr. J. McC., æt. 40, who in the Canadian troubles of 1825, received a severe blow on the os frontis, and ossa nasi, producing compression of the external table of the os frontis, with great laberation of the soft parts. As the upper part of the nose is destroyed, Dr. M. proposes to remedy the deformity, by dissecting a flap of the proper shape and size from the forehead, and after paring the edges of the deformed part, adapt it by a twist and sutures to the raw surface.

17. Mr. J. D., æt. 45. About twenty years ago this patient had an attack of articular rheumatism, which confined him to bed for several weeks. Since that time, he has enjoyed tolerable health, with the exception of occasional rheumatic pains, shortness of breath, and palpitations after violent exercise. Six months ago, the dyspnœa and palpitations became more severe, and were accompanied by dizziness. These symptoms have increased up to the present time. On examination by Professor Hun, no prominence was observed over the region of the heart. The pulsation of the heart and of the carotid arteries were very visible. The apex of the heart was at the level of the interval between the sixth and seventh ribs. On percussion, the flat sound of the heart extended over a space much larger than natural. On auscultation, near the apex, the first sound was obscure, and accompanied with a blowing. This blowing became more distinct as the ear approached the juncture of the third rib with the sternum, where it was heard during both sounds of the heart. The blowing could be heard during the first sound in the course of the carotid arteries. From these symptoms, Professor Hun pronounced the case to be constriction of the aortic orifices with insufficiency of the valves, and hypertrophy of the left cavities of the heart. The frequent complication of rheumatism with endo carditis, and the mode in which they lay the foundation of organic disease of the heart, were very fully and clearly explained.

[FOR THE NEW YORK LANCET.]

Case of Chronic Pleuritis, with copious Effusion within the Thorax, successfully treated.

MR. EDITOR:—

It is not often I find leisure to report cases for the benefit of my profession, but the following, in my opinion, is one of more than ordinary interest, and I therefore remit you a hasty sketch of its general outlines, for a place in the *Lancet.*

I remark in the commencement that the patient, Josiah M. Colburn, is a medical practitioner of this place, forty-two years of age, of the sanguine temperament, and of active, industrious, and abstemious habits. For many weeks, and even months previous to his confinement, he was troubled with acute lancinating pains in the left side, slight dyspnœa, general fatigue, restlessness, irritability, cephalalgia, drowsiness, florid, amounting at times to a livid complexion, disturbed sleep, chills, and scanty urine. An unusual press of professional business, added to long rides with much exposure to wet, led the Doctor to attribute his ill feelings in part to over exertion, and as he occasionally relieved himself with simple means, he continued in exclusive devotion to business for a long time, harassed as he was with these painful premonitions of disease within the chest.

October 8th, 1842, he refused to visit patients, and took to his bed with deep-seated pain in his left side—great difficulty of breathing—inability to lie down—short dry cough—frequent, energetic pulse—constipated bowels—little or no urinary secretion, and moderate pyrexia. He was bled *pleno-rivo*, sixteen ounces, a large epispastic applied over the left chest, tinct: digitalis given every three hours, and his bowels relieved with 10 grains sub: muriat:, followed by senna and manna. Next day there was a slight mitigation of his most urgent pleuritic symptoms, but serous effusion was evidently increasing. Under counter-irritation with diuretics, such as I shall hereafter mention, the Doctor grew worse and worse for a week or ten days, laboring under a sense of almost constant and immediate suffocation—hurried respiration—depressed, and at times, intermitting pulse—great dulness of percussion over left lung, and absence of respiratory murmur—stupor, with occasional starting, as if frightened by some fearful object—œdema about the temples—partial sweats, and countenance extremely livid. For many days he had been taking freely of the iodide of potassium, squills, and calomel—Spts: Nit: Dulc:—Spts: Terebinthina—Cream Tartar—Bac: Junip:—Seneka—Asclepias Syriaca—Pyrola Umbellata, &c., with occasionally a mild hydragogue. All this time not a pint of secretion was thrown off by the kidnies, and the system was but partially relieved by cutaneous perspiration. Professor Hooker, of New Haven, who I must say was very happy both in his diagnosis and prognosis in this truly alarming case, judged there was from six to seven pints of serum effused into the left chest, but as I am not in the habit of measuring hydropic effu sion in the living body, I am satisfied with saying the quantity must have been considerable.

Our patient was now put upon balsam copaiva, a teaspoonful every two hours; dulcified nitre, half a wineglass full every two hours, with the following pill:—

℞ Elaterium, gr. j.
Digitalis, ℈j.
Scillæ, ℈j.
Littæ, grs. v.
Syrup, q. s.—Make 40 pills.

This pills was given every three hours until copious alvine discharges were produced. In one night which I remained with him, he evacuated *per ani* upward of a gallon of thin serous matter, with evident relief to his thoracic symptoms. As yet little or no urine made. Some danger of sinking—more nourishment allowed—the pill discontinued, but the copaiva and nitre given in increased doses. I remark here that extensive irritation and absorption were kept up, from the commencement of the treatment, over the whole region of the chest, by frequent vesication; the application of corrosive sublimate in solution, and the constant use of the iodine ointment; but blisters seemed to be the most salutary in their effects.

October 23d. Bears the copaiva and nitre well, and begins to pass urine. These two articles were now the principal. Diuretics relied upon, all others having failed, the bowels being occasionally relieved with the elaterium pill. This course, followed up for a few days with the free use of alkalies, and he passes urine by the gallon in twenty-four hours. Compression about the left lung, in some measure removed, and corresponding symptoms of pectoral disturbance *better*.

October 28th. Increased diuresis—begins to lie down. Copaiva and nitre produce nausea, and are given in diminished quantity. Sleeps well, with a Dover's powder, and general symptoms improve under the above course. It is proper to state that the antiphlogistic plan was strictly pursued, yet a somewhat nutritious regimen was allowed through the whole treatment.

I am happy to say the Doctor is now slowly convalescing, and the prospect is, will soon return to his former usefulness in his profession. There is yet, however, considerable dulness of percussion over the middle of the left lung, owing probably to adhesions and thickening of the pleura, but the respiratory murmur is audible over nearly the whole chest. Although I was in daily attendance upon this case, I do not report the above as my own treatment, for I ought to mention that Dr. Hooker, of New Haven, and Dr. Tomlinson, of Huntington, were both in attendance for several weeks in succession.

Remarks.—Regarding sub-acute or chronic inflammation of the pleura with effusion, a formidable, and, to say the least, a dangerous affection, it is nevertheless, in good constitutions, under the control of therapeutic means, and is susceptible of permanent cure. It is fortunate for the sanability of such diseases, that the effusion, however great, rarely happens to both cavities of the thorax at the same time. I attribute the success in the above case mainly to the enormous doses of copaiva and nitre, the elaterium pill, and free vesication; although the mercury given from time to time should not be overlooked, as greatly favoring the action of the absorbent system.

A. Beardsley, M. D.

Birmingham, Ct., December 12th, 1842.

Case of Spontaneous Rupture of the Spleen.

BY G. BODICHON, M. D., OF ALGIERS.

On the 18th of October, 1838, a man was found dead not far from the fort Oued-el-Kerma. Some suspicion of violence having been entertained by the authorities, an investigation of the cause of death was made.

The man was a retired soldier of the foreign legion, and for several years had been subject to repeated attacks of intermittent fever, which had returned with great violence during the last few weeks. The persons by whom he was employed remarked that his respiration was considerably impeded, and the left side of the abdomen greatly swollen. On the morning of the day on which he died he ate his breakfast as usual, and then drove out the cattle to pasture; he had, however, proceeded only a few hundred paces, when he was seen to sit down on the ground, roll over into a pool, and immediately expire. The body was examined on the 19th. There was no trace of external violence. The abdomen was greatly distended, and, on its being punctured, a very great quantity of blood escaped; the lungs and heart were collapsed, and remarkably devoid of blood; the spleen occupied the whole of the left side of the abdomen, extending from the level of the sixth rib into the pelvis, and projecting laterally beyond the edge of the linea alba. On the anterior surface of the organ there was a laceration of two inches in length by one in breadth. The splenic artery was as large as a goose-quill, and the vein was four or five times its usual size. The parenchyma of the organ presented numerous cells, large enough to receive the end of a catheter; and this arrangement was particularly evident in the neighborhood of the lacerated part.

In this case, then, the hypertrophy and laceration of the spleen evidently depended on the congestion produced by the frequent accesses of intermittent fever; the cellulo-vascular tissue of the organ was one large mass of aneurismal varix, and at length gave way under the distension to which it was subjected.—*Jour. des Connais.*

Gonorrhœal Rheumatism.

At a late meeting of the Medical Society of London, Mr. Headland made some remarks on the disease, as he considered, very inappropriately called 'gonorrhœal rheumatism.' It was an affection which, in many instances, baffled all our treatment, and one which had this peculiarity—namely, not being confined to those persons subject to rheumatism in its ordinary form. One of its most marked premonitory symptoms was a bloodshot appearance of the conjunctiva, followed by pains in the shoulder, elbow, or other joints, soon after the patient retired to rest. He (Mr. H.) had tried various remedies, and the one from which he thought he derived most benefit was that of the iodide of potassium, given in small doses; even this he looked upon with suspicion in a few cases. It is an affection which requires some months to get completely rid of, by whatever remedies you employ.

Dr. Risdon Bennett asked if colchicum had been tried in these cases, and he was answered in the negative.

The treatment of gonorrhœa next occupied the society, and it was very generally admitted that the treatment of this affection was very unsatisfactory and empirical, some using purgatives, some injections only, while others relied entirely on nature, and left the disease to wear itself out, which was often followed by stricture.

Mr. Clarke said that Mr. Acton affirms he can cure the complaint in eight days by a nitrate of silver injection. It was necessary to use a glass syringe.

The Secretary said he used a course of purgatives, followed by copaiba.

Mr. Headland spoke of the disadvantages of the ordinary mode of using copaiba, as it mostly disagrees with the patient's stomach.

Mr. Proctor said he was a pupil of the old Abernethy school, and placed very great confidence on purgatives and the antiphlogistic plan of treatment. He often observed a very high state of fever—nay, delirium accompanying first cases of the disease; and the mother and family were generally greatly alarmed about the *young gentlemen* having a violent attack of fever. Some were of opinion that subsequent cases of gonorrhœa were as violent as the primary attacks of the disease; but the feeling was generally opposed to this view, and also to the general purgation plan.

Mr. Headland alluded to the metallic taste that was very rapidly produced in some cases where the iodide of potassium was administered.

Mr. Elliott went into a very minute chemical analysis of the action of this medicine on the stomach, and alluded to the fact of its being likely to form an iodide of amadyne, in cases where starch, or such other farinaceous ingredients may be used in the aliment, and hence often neutralise the views of the scientific and learned gentlemen who may have recourse to it under these circumstances.

Dr. J. B. Thompson said, with regard to the use of the iodide of potassium, that he had seen its effects produced on the mouth of the patient. An old gentleman with whom he had been travelling some years ago, when it was only given in the small dose of two grains, said he found this peculiar taste referred to in his mouth in about four hours after it had been given. It could hardly be supposed, then, that this rapid action could have been so soon produced through the patient's system. It would appear as if this medicine were capable of causing a local and immediate action on the salivary glands and acutely sensitive mucous tissue of the mouth and fauces. As to the use of injections, Dr. Thompson could not say anything, as far as regarded the nitrate of silver injection, never having tried it, or seen it tried; but as far as a few cases could go, he could speak with some degree of confidence as to the use of creosote in rose water in the early stages of the complaint, before the inflammation had extended far into the canal of the urethra. His attention was first drawn to it by noticing its very beneficial results in other cases of morbid discharges from mucous canals and passages, such as the nose, ear, &c. &c. As to what had been stated regarding the use of copaiba preparations generally, Dr. Thompson fully agreed as to how frequently they disagree; but he thought this may be very well avoided by having recourse to the extract of copaiba, which was attended with all the good effects and none of the unpleasant consequences spoken of. It could be given in pill, and would not affect the fauces or stomach, nor be followed by the cutaneous rash which sometimes results from the other forms in use.—*Prov. Med. Jour.*

Cure of Chlorosis by Iron.

There are at present several patients, laboring under chlorosis in the clinical wards, to whom M. Chomel directed the attention of the pupils.

On the 22d of January last, a young woman, 21 years of age, was admitted into the hospital, affected with chlorosis in a severe degree. Her countenance and lips were extremely pale; the conjunctiva quite transparent. There was a strong *bruit de souffle* in both carotid arteries, and the palpitation of the heart was so violent that the patient was unable to make the slightest exertion without bringing on a feeling of suffocation.

The preparations of iron were now administered, and the symptoms gradually diminished; in a few days the patient recovered some strength, the carotid souffle had diminished, the appetite was restored, and the digestive powers improved. The diet was now increased; she had roast meat and some Bordeaux wine. Within a month after the commencement of this treatment the lips and cheeks had recovered their natural color; the palpitation and *bruit de souffle* in the carotids had disappeared, and the woman was nearly restored to complete health.

In the treatment of chlorosis, M. Chomel employs the powdered filings of steel, in preference to the carbonate, lactate, and other preparations recently introduced. M. Chomel is far from denying the efficacy of these latter, but, from his own experience, he regards the steel filings as preferable, because they are less disagreeable to the taste, and more certain in their action. In the same ward with the female whose case has been just mentioned, is another young girl, also laboring under chlorosis in a very severe degree. The face is extremely pale; lips and gums devoid of color; loud *bruit de souffle* in the carotids; palpitation and souffle accompanying the first sound of the heart; great weakness; imperfect digestion, &c. Shortly before her admission into hospital the catamenia were suppressed, and an attempt to restore the discharge had been made by applying leeches to the thighs, but the general symptoms were considerably aggravated by this treatment. The patient appears to be of feeble constitution; her menses appeared at the age of fourteen, but since then have been irregular; about a year ago the first symptoms of chlorosis manifested themselves, and she took bitters, with some relief. Having omitted her medicines, the symptoms of chlorosis returned in an aggravated form; the least noise or impression causes ringing in the ears, disturbance of vision, and a tendency to faint; there is also some œdema of the lower extremities.

The steel filings were now administered, and within five days a manifest improvement took place; the souffle has disappeared in the right carotid artery, but there is some in the left still; the palpitations and œdema have considerably diminished. The patient is much better, but the remedies must be continued for some time longer, and she must have a strengthening diet. The effects of this treatment are often very rapid and astonishing. M. Chomel has often seen young women, of the higher classes of society, in whom the disease was completely removed in fifteen or twenty days; in all cases, however, the remedy must be assisted by accessory means, such as proper diet and exercise.—*Gaz. des Hop.*

Extra-Uterine Pregnancy.

A woman, 70 years of age, was admitted into the Hospital Cochin, under the care of M. Blache, for an abdominal tumor, which she had had for thirty years. The tumor, which occupied the left iliac fossa, was large and hard; it had latterly become very painful; the abdomen was tense, and painful to the touch; and the lower extremities are œdematous. She died of peritonitis in September last. On examination of the body, the tumor was found to consist of a full-grown fœtus, almost all the bones being connected together by incomplete ligaments, and forming a complete skeleton twisted on itself. The pelvis and lower extremities were the back part of the tumor, the occiput in front. The head constituted at least two-thirds of the whole mass. This poor woman considered that this tumor showed itself when she was forty years old; she ceased to menstruate at fifty, having previously borne one child at the age of seven and twenty.—*Bul. Gén. Therap.*

THE COLLATERAL SCIENCES.

Sense of Taste.

A too acute sense of taste is a sign of disturbance of the nervous system; accordingly, in fevers it indicates a transition to the nervous form, and occurs in hysteria and hypochondriasis. Want of taste is often the consequence of a thick coating of the tongue, as in gastric diseases, more especially gastric catarrhs; or, where this coating of the tongue is wanting, it arises from irritation, from a plethoric state of the brain, as in many febrile states, particularly those accompanied with delirium, in typhus, putrid fever, in mental diseases, and lastly, in apoplexy. If the sense of taste does not return on convalescence, a relapse of the disease is to be dreaded; and in gastric fevers, particularly those of an intermittent form, dropsy is to be apprehended.

Depravation of taste seldom proceeds from the nervous system, as in hysteria, in the nervous stage of fever, in the epileptic paroxysm; then the patient finds an agreeable taste in things which have a disagreeable one, and *vice versa*, but has not the same sensation of taste from all kinds of food, without, however, deriving any enjoyment. This is, on the contrary, the case where the depravation proceeds from the secretion of the lingual, intestinal, and respiratory mucous membrane.

The insipid taste belongs to catarrh, to inflammation of the respiratory and gastric mucous membrane; it is accordingly observed in the case of worms, in intermittent fevers, and in consumption. Its disappearance with the occurrence of crisis is favorable; its long continuance gives reason to dread degenerescence of the bowels, or a chronic course of fever. If it still continue after the termination of the disease, there is reason to apprehend a return of the same, or dropsy.

The bitter taste is a sign of irritation or inflammation of the duodenum, and of most diseases of the liver. It sometimes accompanies intermittent fever. In pulmonic inflammation it occasionally renders the prognosis suspicious, inasmuch as it indicates a participation of the liver as well as of the pleura. If it continue for a long time in chronic diseases, degenerescence of the liver is mostly present. If it appear in the morning, and disappear as soon as the individual has eaten something, it can scarcely be called a morbid taste.

An acid taste accompanies irritation of the stomach, and is mostly combined with heartburn, acid eructations, &c. If it continue long, there is reason to dread induration, softening, cancer of the stomach, hardening, suppuration, degenerescence, and hypertrophy of the liver, particularly of the left lobe.

A salt taste is commonly occasioned on the tongue, through the secretions of the bronchial mucous membrane; it accordingly appears in pulmonary consumption, even in its first stage.

The sweet taste is one of the more common delusions of taste in hysteria, hypochondriasis, and nervous fever. Besides these cases, where it seems to proceed from the nervous system, it is a symptom of diabetes, of impending coughing, and vomiting of blood, and of softening of pulmonary tubercles. It is a bad sign in pulmonary consumption.

A foul or even a putrid taste is sometimes occasioned by morbid states of the mouth, jaws, throat, nose, more especially caries and ulcers, and accordingly occurs in syphilis and scurvy; sometimes it proceeds from the intestinal canal in cancerous ulceration of the stomach, in gangrene of the intestines, in abscesses which discharge themselves into the alimentary canal, in ileus, and in putrid fever; lastly, the foul taste is observed in gangrene of the lungs, in abscesses, in softened pulmonary tubercles, and in chronic bronchial catarrh. Accordingly, in chronic diseases, and where it is observed in inflammations, with remission of the febrile phenomena, and the occurrence of debility, the foul taste is of unfavorable import.

The urinous taste takes place through long-continued ischuria, and in lithiasis it yields an unfavorable prognosis.

The metallic taste is occasioned by the action of metals on the system; accordingly, when mercury is administered, it is the precursor of salivation. Hysteria and hypochondriasis sometimes produce it; it also precedes severe epileptic attacks. It is observed in many intermittent fevers; if it continue during the intermission, new paroxysms may be apprehended.—*Schill's Semeiology, translated by Dr. Spillan.*

ITEMS AND INTELLIGENCE.

Statistics of Phthisis.

Dr. Hughes has collected a series of cases of phthisis observed by himself, from which he obtains the following statistics:—The number of cases is 250, of which 175 were males, and 75 were females; of these there were 203, of which 138 were men and 65 women, whose chests were only explored during life. The remaining 48, of which 37 were men and 11 women, were examined after death. Of these, the left side was chiefly diseased in 116 cases, or 46 per cent.; the right in 89, or 36 per cent.; the more diseased side was doubtful in 45 cases, or 18 per cent. Of the 116 cases on the left side, there were 76 males, 43 per cent., 40 females, 53 per cent.; of the 89 cases on the right side, there were 66 males, 38 per cent., 23 females, 30 per cent.; of the 45 cases in which the more diseased side was doubtful there were 33 males, 19 per cent., 12 females, 16 per cent. Of the 48 cases examined after death, of which 11 only were females and 37 males, the tubercles were confined to the left lung in 3 males and 1 female, and to the right lung in 1 male only. From this it appears that there is a somewhat greater liability to tubercular action on the left side of the chest than on the right.

Of these 250 cases, the upper lobe of one or both lungs was solely or principally diseased in 237, or 95 per cent. Of the 13 remaining cases, of which 11 occurred in males and only 2 in females, there were 9, or 3 and 3·5ths per cent. of the whole number, in which both lungs were universally and uniformly diseased; of these, 8 were males and 1 was a female; of the remaining 4 cases, the upper lobe in three was at least equally affected with other parts, and in the fourth the tubercles were deposited in the base, and were not found in the upper part of the lung. This last case was that of a poor boy, who had large opaque turbercles in the peritoneum, diseased mesenteric glands, fæcal abscess from ulceration of the intestine, chronic bronchitis, a few tubercles in the right lung, suppurating broncial glands, and at the base of the left lung largely dilated bronchial tubes filled with purulent mucus, and chronic pneumonia. There were also in the same part a few transparent tubercles, and in one portion, about as large as a walnut and not consolidated by pneumonia, there were several of these bodies which were larger and perfectly opaque. Tubercles are deposited first in the upper part of the lung in the proportion of 94 per cent.

After puberty, phthisis is most generally fatal between the ages of 20 and 30; next, between 30 and 40; then between 40 and 50; below 20 and above 50 the mortality from this disease is very much diminished. Fewer females than males affected with this disease attain the age of 40; in other words, women die of consumption at rather an earlier age than men. Dr. Hughes states further, that tubercles may be simultaneously deposited throughout both lungs, and may then present no other physical signs than those of bronchitis, but this form, which is comparatively very rare, is not necessarily acute, and confined to young persons.—*Guy's Hospital Reports.*

A zoological society has just been formed at Berlin, under the presidency of the distinguished Humboldt; and a zoological garden is to be forthwith established at the south end of the park. The king has signified his approbation, by granting to the society all the animals, which were kept in the Island of Peacocks, near Berlin, and has authorized his treasurer to advance about 360,000 francs, without interest, repayable by ten equal yearly instalments.—*London Athenæum.*

THE

NEW YORK LANCET.

Vol. II. NEW YORK, SATURDAY, DECEMBER 24, 1842. No. 26.

ANIMAL MAGNETISM.

[The subject of animal magnetism is one which we have hitherto refrained from taking up, partly because we did not deem it worthy to exclude more valuable matter from our space, and partly because we found some difficulty in obtaining any publication on the 'science' which we regarded as worthy of patient and serious study. We are, however, presented in a late number of the 'Quarterly Summary of the Transactions of the College of Physicians of Philadelphia,' with the synopsis of a clever paper by Dr. John K. Mitchell and the discussion thereon; and this we have thought proper to transfer to our columns 'without note or comment,' leaving to our readers the work of critical examination.—Ed. L.]

Dr. Hewson, President, in the Chair.

Present, thirty Members.

Dr. Mitchell concluded the reading of his communication on the subject of Mesmerism. The great length of this paper precludes its insertion in this summary.

The following are the author's recapitulation and conclusion; which embrace his leading deductions from the various facts detailed by him in the communication.

RECAPITULATION.

1. The investigations into the claims of mesmerism have been hitherto imperfect, because they have been conducted either by interested partisans, or prejudiced opponents.

2. All previous examinations of this difficult subject have been directed rather to its undue pretensions, than to its less obtrusive foundations.

3. The researches of the committees detailed by learned societies, have been contradictory and unfruitful, chiefly, because the trained subjects of the mesmerizers were examined, instead of those among their own friends and acquaintances, on whom they could rely for the unsophisticated representation of the natural phenomena of mesmerism. They invited deception, and either implicitly confided in it; or, having detected the attempt to mislead, condemned the whole system as one of fraud and imposture. Hence, they were always in those extremes which border on truth, but are never within its confines. Astronomy is not the less true, because the ignorant believe that the stars are holes through which the light of Heaven breaks, or because astrologers pretend to see the fates of humanity registered in the conjunction and disseverance of the planets.

4. Imagination and imitation cannot account for the uniformity of the phenomena of the mesmeric state, in persons of all ages and conditions, who are totally ignorant, not only of the symptoms to be produced, but of the design of the mesmerizer.

5. Neither will they explain the analogies found to exist between natural and artificial somnambulism.

6. Nor can we, by any rational view of their cases, ascribe to any thing but a physical influence, the effect of *passes* on the diseased condition of certain patients, some of whom did not observe the manipulation, and none of whom understood its import.

7. Admitting that the mesmeric sleep may be and is produced solely by mental means, the method as well as the phenomena of restoration, both in natural and artificial somnambulism, forbid us to believe that the patients are usually conscious either of the act or the intention. Many of them showed plainly their ignorance by their conversation at the time, and others were totally incapacitated for observation.

8. If we admit the awakening without the aid of the patient's mental co-operation, we can find no reasonable difficulty in believing that the mesmeric sleep is producible also without that co-operation.

9. The phenomena of artificial somnambulism are,—1st. An exaltation of the circulation, without a corresponding increase of the respiration. 2d. An obtunded sensibility to causes of pain, and sometimes, though rarely, its total obliteration. 3d. The more or less complete obliviousness of the thoughts and events of the mesmeric state, while awake, although the memory of the events of the natural state is strong in the artificial state. 4. The retention of locomotion and the facility of being let into suggested dreams, are also curious effects of the mesmeric action. Nothing is too high for the daring, or too absurd for the belief of the dreamer. But all the mesmerized patients are not susceptible of this influence. A few subjects resist, even when asleep, all attempts to mislead them, although they present most of the other peculiarities of somnambulism.

10. To this property of artificial dreaming may be referred the alleged miracles of *clairvoyance*, intuition, and prevision. The subject dreams that he sees, and the questioner is deceived, by his confidence, his plausibility, and his ordinary character. He knows him to be honest, and he does not perceive that he is himself led astray by his uncorrected imagination. There is all the effect of a fraud, without intention to mislead, and without blame.

11. The mesmeric effect is usually producible within ten minutes, and at the first sitting, but some persons have yielded only after long and repeated trials. In general, unless very marked effects are exhibited within half an hour, all subsequent attempts to mesmerize are fruitless.

12. The mesmeric sleep may be dissolved by time alone, the natural duration of the paroxysm lasting from thirty minutes to nearly five hours. The fear of not escaping from the spell, in the event of the death, or absence, or loss of power of the magnetizer, is therefore not well founded.

13. The artificial solution of the mesmeric sleep requires sometimes only a single wave of the hand, sometimes many. The mean time is about two minutes.

14. Independently of the voluntary aid of the mesmerized subject, the time taken to dissolve the sleep is very sensibly affected by the distance from him. Thus, in contact, a case consumed 4′ 4″; at two yards, 7′ 30″; at four yards, 16′ 45″.

15. Sex does not appear to exercise any very marked influence on the mesmeric susceptibility.

16. Age is a more modifying cause than sex. Though no age is exempted, the very young and old seem least susceptible; and the period of life

between 12 and 20 is that most favorable to the mesmeric influence.

17. Of the temperaments, the nervo-sanguineous seems most liable to the mesmeric action.

18. Although without an exception, so far as I can discover, mesmerists agree in believing that a sound state of health is unfavorable to the success of their operations, I have found it most conducive to well marked mesmeric results. Of twenty-six somnambulists, nineteen were in good, and seven in bad health.

19. The mesmerizing power seems to be very generally possessed, but the susceptibility to soporose mesmeric impression is confined to a few individuals, being about one in seven or eight of those subjected to the trial.

20. The *rapport*, *relation*, or *communication*, supposed to have an absolute existence, dependent on the mesmeric fluid, seems to be entirely voluntary on the part of the patient, and to rest on his knowledge of its supposed necessity. It is, therefore, a delusion; but one of the greatest convenience to the public exhibitors of mesmeric wonders.

21. The delusion as to the '*rapport*' is one of the many hallucinations of the mesmeric state, for which the subject of it is no more answerable than for any of the wild and monstrous dreams to which the disordered fancy may be led, in that unnatural condition both of mind and body. This truth is clearly proved by analogical cases of insanity, where similar delusions continue for years.

22. The mesmeric state curiously modifies the condition of the senses. Sight, hearing, and touch are usually improved, taste, smell, and sense of pain as commonly impaired.

23. As the sense of touch and of pain are so diversely affected by mesmerism, we are led to regard them as independent senses; probably, therefore, supplied by separate nervous fibres. Such an inference ought to have been made before, for many organs have the sense of pain, but not the sense of touch. The presence of a poison will give pain to the stomach or intestines, which do not perceive the motions of the worms that infest them. If this view be correct, the sense of pain is a sixth sense.

24. *Many* of the feats of the *clairvoyants*, are the result of the sharpened hearing, which enables them to detect objects by the sounds they make. They really believe they see them, and so does the exhibitor, although he aids them by handling audibly the various objects. Thus he opens and shuts a pencil, a penknife, or a spectacle case, and rubs a stick, or a sheet of pasteboard He always makes as much noise as possible with every thing, and he generally asks the producer of a marked card to explain the words or device to him.

25. As we cannot believe in mesmeric 'rapport,' so we are not able to credit the existence of any peculiar sympathy between the operator and subject. Untrained or ignorant patients never show sympathetic phenomena. I have been pinched, and hurt otherwise, a great many times, without observing any suffering on the part of my subjects, until they were taught to believe that such a relation existed; and then they very honestly felt hurt, as people do in dreams—a kind of imaginary suffering.

26. The phrenological phenomena of mesmerism, when rigidly examined, are found to consist, as do most of the mesmeric wonders, of 'such stuff as dreams are made of.' The *excitement* of the brain *is general*, the *direction* of that excitement is *given* by *the mesmerized person's knowledge of phrenology;* but the patient is not in any case aware of his mental co-operation. This singular delusion or misapprehension, runs through nearly the entire subject of mesmerism; most of the phenomena of which are a strange mixture of physical impulse and mental hallucination. Phrenologists alone feel the phreno-mesmeric excitement. Persons partially acquainted with phrenology, experience it only as to the organs known to them; while those who are totally ignorant of the subject, present no local manifestations, until they are taught, either awake or asleep, what they should know, and what they should do. The displacement of old organs, in one city, their retention of location in another, and the adherence of the patients to the peculiar and dissimilar systems of phrenology, which they have, respectively, been taught, show clearly, that the direction of the cerebral excitement is personal and arbitrary; while the new maps of the cranium, so widely different from each other, leave us no longer in the least doubt as to the delusive source of the compound science of phreno-mesmerism.

27. The mesmeric influence is the effect of what the natural philosophers call *induction*. The will of the operator acts solely on himself; his altered system re-acts on the subject of the experiment, by an unexplained power, analogous to the equally inexplicable *induction* of the mechanicians, and the *presence* of the chemists.

28. Mesmerism may be sometimes usefully employed to allay nervous irritation, procure sleep, and obtund nervous sensibility, during surgical operations; but from the fewness of susceptible persons, it can be used very seldom for such purposes. In all other cases it appears to be of little use; and so far as I know, has never cured any serious disease. On the other hand, it sometimes, especially in unpractised hands, produces frightful disorders both of mind and body, and should therefore be resorted to solely for proper and important purposes, and then only with due precaution.

29. The cases of natural somnambulism, so like those of the mesmeric state, the permanent magnetic power of some individuals, the relief afforded to paralysis and stupor, and the restoration from *natural* somnambulism by mesmeric passes, go far to show that the disturbance of the nervous system, which is produced by mesmerism, may and does occur in certain stages of disease, and is not unfrequently present in nervous affections where we have not hitherto suspected its coincidence.

30. Mesmerism may, for the above reasons, be employed to relieve, temporarily, affections of a nervous character, when the usual means fail; but it should be used always with caution, and only when the failure of all ordinary measures renders its application a matter of necessity.

31. The claims to a peculiar *medical intuition*, set up by magnetized persons, or their exhibitors, is destitute of foundation. The pathology is usually absurd, the prescriptions are inefficient, dangerous, or ridiculous, and after sixty-eight years, mesmerism has not detected a new theory of disease, or suggested one useful remedy.

In conclusion—I may be, perhaps justly, charged with giving to the subject of mesmerism an undue importance, and bestowing on it, a disproportionate share of time and attention. The results, being chiefly negative, add almost nothing to our stock of knowledge, and the pretensions now *demonstratively* overthrown, being discarded already by common sense, and the antecedent labors of others, scarcely deserve, in the opinion of the world, a passing notice. But I think I am justified in my laborious investigation, by the interest still felt in the sublect, over a large part of the civilized world, by the want of digested and comprehensive facts, and by the bearing of the phenomena on the practice of medicine, and on the physiology of the nervous system. Perhaps, too, it may not be unimportant to the guardians of public and private morals, the administrators of justice, and the conservators of family and educational discipline, to learn, what unsuspected physical agents are at work on the human frame, at all times, and in all places. They may thus be enabled not only to guard against abuses, but to make indulgent and charitable estimates of the character and extent of crime and error.

Doubtless, the mesmerists will say that I pay too little attention to the testimony of others on many of the points in which I differ from them, and others may allege that for all that part of the subject which I admit to be true, I give too much weight to my unsustained personal labors and observations. To both, I may with truth, and without undue pretension reply, that I did not expect to settle any question *definitively* by these researches. They were made carefully and honestly, and the results set down without exaggeration or extenuation, for the purpose of making as close an approximation to an obscure truth, as the time and opportunity would permit. Others, following in the same exact path, may enforce or weaken my conclusions; but sure I am, that it is only thus that we shall finally settle these vexed questions, and not by opinions founded on unrecorded observations, or vague generalities derived from loosely kept records. While I find volumes of conclusions, I discover no tables to which I can refer for support or refutation. I see many edifices, but I discover no foundations for them, and naturally infer that as they rest on no solid bases, they are without weight, and made of imagination.

As to the charge of refusing the testimony of others, I answer, that their evidence is so conflicting as to destroy itself. The most substantial proof, that of distinguished medical men, is usually on my side, and if I have not availed myself of that, how can those complain who give *opinion* on the other side? Few are competent to observe, in a question involving medical knowledge, and scientific attainment. He who would truly understand such phenomena, must know all that is known of the nervous system, and much that is taught as physical science. He must have studied also the human mind in health and disease, and have examined the kindred complaints of somnambulism and catalepsy. Now, it is not a little remarkable that the authors who have written in favor of the higher claims of mesmerism, have not been thus prepared, while the more accomplished observers have decided against those claims. Let me illustrate this further. Phenomena are observed in the heavens—among the stars. Every one sees them—but to whom do we look for the explanation by which these phenomena are fashioned into facts? For how many thousand years did the constellations glide across the zenith, in nightly brilliancy, observed by millions of eyes, before the splendid phenomena assumed to the human understanding the shape of a fact? Until explained by Copernicus, it was a bright illusion—*the very opposite of that which it seemed.* If this illustration does not lessen the confidence of ignorant observers in their powers of discrimination, I am at a loss for means to teach them humility, which can alone give much value to the observations of any one, however otherwise prepared for investigation. That sleepers often describe well distant places and events, is true; but does it follow that they obtain the knowledge by spiritual inspection? Or are they indebted to other and more intelligible means of discrimination? It is not less true, that there is sometimes the manifestation of strong personal sympathy between mesmerizer and subject, but are there not unexamined sources of error in the most obvious explanation of this phenomenon? The dispute is less as to the appearances, than as to the view to be justly taken of them. The vast and airy beings that darkened for ages the skies of the Brocken Mountain, were the wonder and terror of the ignorant peasantry, until more competent observers proved them to be the shadows of human beings, cast by the rising and setting sun in exaggerated volume, on a screen of clouds. That which had been a frightful phenomenon, became an agreeable fact. The shadowy things of artificial somnambulism have long enough displayed their visionary forms on the sky of human wonder. It is time to give them that true import which will take them from the mountebank and pretender, and place them in the hands of philosophy. If I can believe that I have done so much as to bring philosophy to the task, free from prejudice and restraint, I shall be satisfied that my labor has not been in vain.

The discussion of Dr. Mitchell's communication was, on motion of Dr. Darrach, postponed until the stated meeting in October.

Stated Meeting, October 4th, 1842.

Dr. Otto, Vice-President, in the Chair.

Present, twenty-two Members.

After the transaction of the regular business of the College, the consideration of Dr. Mitchell's communication read at the last stated and adjourned meetings, being in order,—

Dr. B. H. Coates remarked, that as no one appeared disposed immediately to open the discussion of the important question submitted for the consideration of the Fellows of the College; and although he had himself seen few experiments, and had not particularly studied the subject of mesmerism, he would take the liberty to introduce the debate, by asking a question of Dr. Mitchell. He had been, certainly, much interested in the able and lucid paper read by the latter, but was not ready to go over it in detail, and had made no preparation for this by taking notes.

If he understood Dr. Mitchell correctly, the latter explained many of the phenomena of mesmerism by *dreaming;* and perhaps correctly so. Now does not this also explain a fact which Dr. Mitchell has cited as evidence of *nervous induction*, or the influence of the nervous activity of one person on another? He alluded to the production of catalepsy or palsy, by certain mesmeric processes. If so, he considered this is as equivalent to referring it to the imagination; for is not dreaming an act of the imagination?

Is it not true, that the condition called mesmeric clairvoyance and somnambulism, which Dr. Mitchell explains by dreaming, and which he thinks may be guided and led by slight sounds, and other surrounding circumstances acting upon the sharpened senses, is not unfrequently accompanied by hysterical symptoms, often including temporary catalepsy, palsy, &c.? And are not these as likely to be guided and led on by ordinary dreaming and the sharpened senses, as are the visions of clairvoyance? In illustration of this view of the subject, Dr. Coates related the case of a young woman who had been under his care in the Pennsylvania Hospital, who had five temporary attacks of entire paralysis of one arm, from hysteria, produced by a moral cause.

Dr. Mitchell replied, that it was his belief, that the influence exerted by the operator, upon the mesmerized person, was purely physical. So much so, that he has known the phenomena of the mesmeric state, produced by passes made by an individual who was himself ignorant of their effects. He believed also that the same result has often followed in cases where the mesmerized persons were entirely ignorant of the intentions of the operator.

It was possible, however, in the highly excited and susceptible state of the nervous system induced by this condition—if the idea of catalepsy or convulsions were to possess or be induced in the mind of the patient, for these actually to occur—but he did not suppose they could take place, if the patient were ignorant of their phenomena.

Dr. Mitchell here stated three cases which occurred in one family, illustrating the effect of mental impressions.

One of the greatest difficulties in examining the subject of mesmerism is, that the physical and mental impressions of its subjects are so mixed up, that it is exceedingly difficult to separate them. To understand the phenomena thoroughly, we must divest them, if possible, of mental co-operation.

Dr. Mitchell was asked by one of the Fellows, to state some of the main arguments in favor of the theory of nervous induction.

Dr. Mitchell replied, that those which occurred to him at the moment were, 1st. The necessity of the proximity of the operator to produce the mesmeric sleep, and the almost immediate awaking of the patient, in many cases, if he retired from him for a few yards. The duration and intensity of the mesmeric sleep being, as a general rule, in proportion to the proximity of the operator to his patient, whilst inducing the mesmeric state. 2d. The comparatively short time required to throw a patient into the mesmeric slumber, whilst sitting or in the erect posture. 3d. The necessity which there exists for the mind of the operator to be intently fixed upon the object which he desires to accomplish: this, it is true, is not necessary in the case of individuals who have been repeatedly mesmerized, as the patient soon acquires the faculty of assuming voluntarily the mesmeric state, or aiding by his volition, very effectually, the efforts of the magnetizer. 4th. The effect produced on the limbs of an individual by passes made from the centre toward the periphery, and the change which is wrought in the condition of the limb by passes in the contrary direction. 5th. The method by which the patient is awoke; and the fact that the time required for this purpose, is altered according to the greater or less distance of the operator from his subject.

Dr. Mitchell considered that the doctrine of the transmission of a fluid either from or to the magnetizer or his subject, is disproved by the fact, that a number of individuals may be put to sleep, one after the other, by the same person, and awoke by another, without either being in the slightest degree sensible that he had parted with or received any thing from the patients operated upon.

Dr. Wood remarked, that he presumed few persons now doubted the occurrence of the physical phenomena produced by the process described by Dr. Mitchell. The only question in his mind was—Are these induced by the operation of the individual's own mind, or are they to be entirely ascribed to the influence exerted upon him by another? The only way to test this, would be to operate on a person wholly unconscious of what is about to be done. Dr. Wood inquired whether Dr. Mitchell has had an opportunity of determining this point?

Dr. M. in reply remarked, that this was a very difficult question to answer, inasmuch as no patient could be mesmerized, for the first time at least, without contact; and this very contact would of course apprize the individual that he was about to be subjected to an experiment of some kind. After the first time, however, he conceived it to be possible to produce the mesmeric phenomena without the knowledge of the patient. This he had himself repeatedly done, if the testimony of the individuals could be relied on. He has succeeded in inducing mesmeric sleep in a lady whilst in the midst of company, and during a conversation that had no relation whatever to this subject, the lady being entirely unaware of his intentions, so far as he could judge from her manner both before and after the sleep. He would refer to a case in point, related to him by Dr. Nott, President of Schenectady College —a gentleman whose testimony would be implicitly received. A young lady, residing in the family of an Episcopal clergyman, whom the Doctor had repeatedly magnetized for the removal of an obstinate cephalalgia, being on a visit to his house, was, at his suggestion, so seated one evening, in the midst of a social circle of friends, that the Doctor could approach her unperceived. The lady was placed with her back near to a baize door, that led into a dark entry communicating with another room. The Doctor placed himself, secretly, in the entry behind this door, and, by there manipulating, soon threw the lady into a complete mesmeric sleep. Re-entering the room, he ascertained this fact, and then returning to his former position in the entry, he awoke her. The lady exhibited no indication that she suspected the agency by which the sleep was induced, but remarked that she could not permit Dr. Nott to magnetize her any more, as she was fearful now of the spontaneous recurrence of the magnetic sleep. The same experiment was repeatedly performed, before the lady discovered the agency of the Doctor. Now this case would appear to afford conclusive evidence of the possibility of mesmeric phenomena being induced without any knowledge on the part of the person operated on of what is about to take place; and yet so readily do persons repeatedly operated on, fall into the mesmeric state, even upon the slightest hint or suspicion that it is about to be induced in them, that it is difficult positively to determine how far, in the case just referred to, the lady's consciousness was or was not concerned in the production of the sleep, which Dr. Nott very honestly believed he had produced entirely without her knowledge.

Dr. Mitchell remarked, that there was another mode of answering the question propounded by Dr. Wood. He would appeal to any gentleman present, whether the mere consciousness on the part of an individual that something unusual was to be performed upon him, could possibly produce the very peculiar and striking phenomena of the mesmeric state—phenomena so characteristic that he did not believe they had ever been observed in any condition of the system, other than that produced by mesmerism. Such an idea could not for a moment be entertained—and hence, this of itself afforded, in his opinion, a satisfactory answer to the question: are the mesmeric phenomena the result of a purely physical cause, or to be attributed solely to the operation of the patient's own mind? It seems then to be proved that the first cause of these phenomena is purely physical, but that subsequently they may be induced by mental causes alone.

Dr. B. H. Coates suggested that the facility which a person acquires, of falling spontaneously into the mesmeric state when he has been frequently subjected to the mesmeric action, is by no means surprising, it being analogous to what we observe in many other of the phenomena of the animal body; for instance, a child after it has once learned to take a few steps alone, rapidly acquires the power of walking. The movement of certain muscles, as the occipito frontalis, or the muscles of the ear, which are at first excited with difficulty, become by frequent trials entirely under the control of the will.

Dr. Evans inquired, whether any patients laboring under insanity or dementia, had been experimented on by Dr. Mitchell, and what were the results in such cases? Dr. E. had himself seen the attempt made in ten or twelve cases, in persons of both sexes, but without success.

Dr. Mitchell relied, that he had tried to induce the mesmeric phenomena in three cases of mania, but had not succeeded in either. It was his impression that any disturbance of the nervous system, or any infirmity of mind, offered an impediment to the success of the mesmeric influence. The most healthy and robust persons were, according to his experience, the most easily mesmerized.

Dr. Pepper stated, that several years ago, he had seen some experiments instituted on this subject, on some of the insane patients at the Blockley Hospital. The effect produced in these cases resembled very closely the phenomena of hysteria and catalepsy. He was not satisfied, however, as to what influence the imagination of the patient might have had in producing these results; and suggested the trial of a series of experiments upon the pupils at the blind school, without the intention of being communicated to them. These experiments were accordingly instituted, and although he was not present when they were performed, he was informed on good authority that they failed in every instance. He would like to know Dr. Mitchell's experience on this point.

In answer to this inquiry, Dr. Mitchell re-affirmed his belief, that an individual could not be mesmerized for the first time without contact, and hence the difficulty, even in a blind person, of experimenting without a knowledge on the part of the subject, that something unusual was to be done. The very fact of the impossibility of producing any impression, in new cases, without contact, is in itself an argument against the imagination being the successful agent in the case, inasmuch as if this were the case, contact would not be necessary. Dr. M.'s opportunities for experimenting on the blind had been very limited. Several years ago he visited the institution for the purpose, and the late Mr. Friedlander selected one of the female pupils for the subject of experiment. She was taken into Mr. F.'s private room, and told that Dr. M. wished to try an experiment upon her; she submitted, and in fifteen minutes all the peculiar physical phenomena of the state were induced—she was thoroughly asleep. On awaking she complained of dizziness, as though she had been drunk, and of a severe pain in her limbs—for which she was obliged to go to bed, and was sick for several days. Some time after he tried the same experiment upon another blind girl, and under similar circumstances; she complained in a few minutes of shooting pains in the limbs, and becoming alarmed, refused to allow the experiment to proceed.

Dr. Pepper did not consider these cases as entirely satisfactory, inasmuch as the subjects were informed beforehand what was to be done, and a moral impression was thereby created.

Dr. Darrach considered the influence of the imagination nugatory, inasmuch as the mesmeric phenomena could be produced in children before the imagination became active. Something very similar occurred also in animals, as was evinced in the 'charming' of birds by serpents, and other equally curious phenomena. In regard to the physical phenomena of the mesmeric state, he had not a doubt; clairvoyance, transference of the senses, &c., he thought were not within the present discussion. How these peculiar effects were produced he would not attempt to explain, the magnetic theory of Mesmer may or may not be the correct explanation. He was fully sensible, from his own experience, of the power which the fixed eye, the hand, and the will of one individual, may exert over another who subjects himself to its influence.

GLEANINGS FROM THE FOREIGN JOURNALS.

On the Operation of Tracheotomy in Croup, performed at the Children's Hospital, and on its Results.

BY A. BECQUEREL, M. D.

During the year 1841, twenty cases of true croup were admitted into the Children's Hospital, Paris. The whole of these patients died; nineteen perished shortly after the attack, and one who had recovered from the croup died in two months afterwards of pulmonary tubercles. Of the twenty cases, thirteen were boys and seven girls; the ages of the patients varied from two to fourteen years.

The operation of tracheotomy was performed in nine cases, eight times by the hospital internes, and once by M. Guersant, jun. In the following remarks I shall endeavor to describe, first, the circumstances under which the operation was performed; second, its immediate results; and third, its remote consequences.

1. *Circumstances under which the Operation was Performed.*

In all the nine cases the children were in the most dangerous state, and no other hope of safety remained; in one, indeed, the operation was performed at the instant the little patient expired, and with the faint hope of restoring it to life. The subject of another case was a child four years of age, who had been ill three days; the cough and voice were extinct; and asphyxia was imminent; there were several traces of false membranes on the amygdalæ and pharynx. The child was carried to the hospital, and operated on without delay. The symptoms of asphyxia, however, were much aggravated during her removal, and the patient expired immediately after the operation. On examination a cylinder of false membranes was found adhering to the larynx and two upper thirds of the trachea. Had the operation been performed half an hour earlier, and the false membrane been expelled, it is clear that the operation might have been successful. In a third case, M. Guersant, jun., operated on a child affected with stridulous laryngitis which bore a perfect resemblance to true croup; but no trace of false membrane escaped from the opening or was found after death. The periods at which tracheotomy was performed in the nine cases were as follows:—1 on the second day; 3 on the third; 3 on the fourth; 1 on the fifth, and 1 on the sixth day.

2. *Immediate Results of the Operation.*

In none of the cases did any blood penetrate into the trachea, in sufficient quantity to give rise to or increase the asphyxia. The operation was easy of execution and quickly performed.

In four cases the operation was followed by syncope; this generally lasted a short time, but in one case it was so prolonged that we were about to abandon the child as dead; one of the assistants, however, kept up artificial respiration for ten minutes, and the child was restored from apparent death.

One of the first effects of the operation was invariably a remarkable improvement in the patient's condition; the children appeared as if they were restored to life; the respiration became slower and more free; and the purple hue of the face disappeared. Occasionally, however, there were fits of coughing at this period, either coming on spontaneously or excited by the canula, and a quantity of false membrane or mucus was ejected. In several cases the whole of the false membranes was removed after the operation; they did not form again, or in very small quantities, yet, whenever the wound was closed, suffocation became imminent.

3. *Remote Results of the Operation.*

These may depend on the single or combined influence of three causes—viz. the child's sojourn in an hospital, the persistence of the disease, or the operation itself.

In the seven cases now analysed, (two are omitted because they proved instantaneously fatal,) the interval between the operation and the death of the patient was, in one case, 7 hours; in one, 10 hours; in one, 29 hours; in one, 30 hours; in one, 42 hours; in one, 7 days; and in one, 10 days.

The following are the unfavorable symptoms noticed after the operation:—

1. Persistence of the dyspnœa; this generally occurred in accesses, and was accompanied by fits of low, stifled cough; it was alleviated by the expulsion of mucus.

2. Secretion of a great quantity of mucus or mucopurulent matter.

In three cases I was struck by the enormous quantity of mucus secreted by the bronchi, infinitely greater than what occurs in any form of bronchitis among children; in two cases no trace of lesion of the bronchial mucous membrane could be discovered. The existence of this excessive secretion was indicated by a mucous rale all over the chest. It evidently depended on the unusual stimulus of cold air passing in through the trachea. As the little patients began to sink they were often unable to expel this mucus; and by drying in the canula it gave rise to accesses of suffocation. Great care must be taken to keep the instrument clear, or change it often; or to excite coughing by instilling a few drops of water through the canula.

3. Inflammation of the lining membrane of the air passages and pneumonia are, also, complications which occur both after the operation and in cases where it has not been performed.

4. In almost every case the operation was followed by intense general fever; and in two cases the febrile symptoms ran so high (although no inflammation of the lungs could be discovered) that it was necessary to take blood from the arm.

5. Convulsions came on in two cases; in one they appeared two days before death, and in the other were instantly fatal.

6. In one case, where the child survived to the tenth day, the edges of the wound became gangrenous; but this occurred under an epidemic influence, and without it the little patient would have probably recovered. In another case there was emphysema of the neck.

7. *Post-mortem Appearances.*—In the child on whom M. Guersant operated, nothing was found after death, except a small quantity of mucus in the larynx and trachea, with

lobular pneumonia in the right side of the chest. It is difficult to say whether the case was one of stridulous laryngitis, or merely a nervous affection; or whether the false membranes were expelled without being noticed. The child died nineteen hours after the operation. In three of the six remaining cases there were false membranes in the pharynx; in one, no trace of false membrane was found after death, but they had been removed after the operation and expelled by coughing. In one case no lesion what ever was found; a great quantity of mucus had been ejected during life, but there was no inflammation of the lungs or bronchi. In three of the six cases, false membranes were discovered in the bronchi, but no trace of pus. In the child who died on the second day there was intense inflammation of the trachea and bronchi. Inflammation of the tissue of the lungs existed in four cases.

8. *Causes of Death.*—We are now prepared to determine the causes of death after tracheotomy in croup.

These are, first, bronchitis or an excessive secretion of mucus in the bronchi; second, pneumonia; third, the persistence of the original disease, and especially the presence of false membranes in the bronchial tubes; fourth, convulsions; fifth, finally in some cases death occurs without our being able to detect any local disease, and it seems to result from the general condition of the patient. This latter mode of termination should not be lost sight of when we are called upon to weigh the chances of success or failure of tracheotomy.—*Bul. de Therap., Jan.* 1842.

Composition of Confined Air.

M. Felix Leblanc read a memoir on the composition of confined air. The author had analysed, after the method of M. Dumas, the air collected from various localities, as the wards of hospitals, the theatre, chamber of deputies, &c. Finally, he analysed atmospheres rendered poisonous, either by pure carbonic acid, or the products of combustion. At the time of taking the air, every circumstance of any importance was noted, such as the temperature, ventilation, &c.

Air in Hot-houses.—In air collected during the evening, the relative proportions of oxygen and nitrogen were the same as in atmospheric air; but the carbonic acid had completely disappeared under the influence of vegetation.

In a Bed-chamber.—The chamber was closed for eight hours, but the air was the same as atmospheric air.

In Hospitals.—In one of the wards of la Pitié, which was closed during the whole night, the air contained five times more carbonic acid than normal; the oxygen had disappeared in a proportionate degree. In a dormitory at Salpetriere, the air contained 8-1,000ths of carbonic acid.

Lecture-rooms.—In a public lecture-room at the Sorbonne, which contained 1,000 cubic yards, (metres,) and nearly 900 persons, after a lecture of an hour and a half, (although two doors were constantly open,) one per cent. of the oxygen had disappeared, and the carbonic acid had increased in a greater proportion. This shows the utility of artificial ventilation.

In various other localities, the proportions of carbonic acid varied from 3-1,000ths, to 43-10,000ths.

The author subsequently determined, by experiments on animals, that the dose of carbonic acid which they can support without immediately perishing is much greater than that contained in an atmosphere rendered destructive by the combustion of carbon. Experience shows that the proportion of carbonic acid in confined situations increased with their presumed insalubrity, and furnishes, as it were, a measure of it.

According to the experiments of M. Peclet, from 6 to 10 cubic metres of air ought to be furnished every hour, to each adult, and this calculation corresponds pretty closely with the results of M. Dumas's experiments; according to the latter, the effect of respiration from one person during an hour, will be to give 4-1,000ths of carbonic acid, to 3 cubic metres of air, or 2-1,000ths to 6 cubic metres. But in the actual state of things, at least in the ventilated situations, examined by M. Leblanc, the proportion of carbonic acid is not so high.

In inhabited places, where the ventilation is very imperfect, and especially where there are no chimnies, the imperfect ventilation generally effects a change equal to about one half of that which takes place in rooms perfectly closed.

Thus a dormitory, containing fifty persons, and remaining closed during eight hours, ought to have 2,400 cubic metres, or about 50 for each person during the night; afterwards ventilation becomes absolutely necessary.

The analysis of artificial atmospheres seems to prove that life cannot continue beyond a few minutes in air containing 30 per cent. of carbonic acid; the power of resisting asphyxia, under these circumstances, is less in proportion as the natural temperature of the animal is elevated. No decisive experiment has as yet been made to show the degree of alteration produced in air by the combustion of carbon, necessary to make it poisonous. The author shows that the introduction of 3 to 4 per cent. of carbonic acid into an atmosphere proved suddenly fatal to a large dog.

The oxide of carbon seems to play the chief part in the production of the fatal effects which follow the combustion of charcoal.—*Academy of Sciences, Paris.*

Solution of Urinary Calculi.

At a recent meeting of the Medical Society of Paris, M. Petit related the following interesting case, illustrative of the action of Vichy water on urinary calculi.

The patient, a man named Jacob, had been treated during the season of 1839, by a course of Vichy waters, but had not received much benefit from them, having neglected to follow the directions given to him. On the 10th of June, 1840, he was examined by MM. Civiale, Blandin, and Berard, who frequently seized the stone between the branches of the instrument, and discovered its diameters to be thirteen, fourteen, and fifteen lines.

The man arrived at Vichy on the 21st June, and commenced his treatment on the 23rd; this time he followed punctually every direction. The waters and baths were administered in the usual manner, and, in addition, the mineral waters were injected into his bladder, by means of a double syringe, two or three times a day. The dose of the waters taken by the mouth was from twelve to fifteen and often twenty glasses daily.

This treatment was borne without any inconvenience, and the other attendants at the spa took care that it was not interrupted for a single day. Towards the commencement of August the patient began to pass some fragments of calculi; several of these were lost, because he was often compelled to make water when away from home. About the 10th of September the discharge of calculous fragments ceased; the patient was now free from pain and the sensation of a foreign body, and made water freely. On the 18th he left Vichy, and on the 28th November he was examined by MM. Civiale, Blandin, and Berard, who decided that the bladder was free from stone. The patient now enjoys perfect health, and is completely free from all symptoms of catarrh of the bladder.

This is the only case in which the complete removal of the urinary calculus by the Vichy waters has been clearly demonstrated. M. Petit thinks that the calculus was destroyed rather by disintegration of its particles than by solution; he also remarks that even this case, striking as it may appear to be, leaves some doubt upon his mind, because the patient had undergone a lithotriptic sitting at the hospital Beaujon before he commenced the use of the Vichy waters. Finally M. Petit concludes that the waters of Vichy chiefly act on the mucus which unites the particles of calculi together, and in this he coincides with the opinion of M. Pelouse, which we published in our last number.—*Prov. Med. Jour.*

Case of Lumbar Artificial Anus terminating successfully.

BY M. AMUSSAT.

In a recent number of the 'Provincial Journal' we published a highly interesting case of lumbar artificial anus, performed at Leeds, by Mr. Teale. The operation was not successful, probably because it had been delayed too long. Since then M. Amussat has published the following successful case, which makes the sixth performed by him. We insert it, slightly abridged, as we are desirous of directing the attention of English surgeons to an operation which has not, we fear, received from them the degree of attention that it merits.

M. C——, tailor, 57 years of age, was attacked by pleurisy at the age of 17; since then he has been subject to cough and frequent spitting of blood, which always made him dread consumption, but no sign of this disease has appeared. For a length of time, whenever fatigued, he felt a dull, deep pain near the spleen, which compelled him to suspend his work. About nine months ago the patient first perceived a difficulty in passing his stools, which were small in quantity, of a greenish tint, and often tinged with blood; afterwards he passed nearly a glassful of pure blood by the anus. These symptoms were relieved by appropriate treatment, but soon afterwards they returned, and the patient perceived a tumor in the left iliac fossa; this was the seat of considerable lancinating pain, and all the symptoms were aggravated from this time. The patient now came to Paris for advice. On examination a tumor was distinctly felt in the left iliac fossa, appearing to rest on and following the course of the sigmoid flexure of the colon; it was from two and a half to three inches in length, by one thick, and it was impossible to say whether or not it was formed by the intestine. Various purgative remedies were now administered, but without effect; and the abdomen became tympanitic and painful. M. Rostan, who was consulted, diagnosticated a cancerous tumor of the intestine, and thought that the patient's death was not far distant. On the following day, November 20, 1841, M. Amussat was consulted; the abdomen was now greatly distended with gas, and there was frequent inclination to vomit, with some hiccup; the patient passed a good deal of air from the mouth, but none *per anum*. M. Amussat agreed in opinion with M. Rostan, but was desirous of having further advice; in the mean time purgatives were given, and forced enemata were thrown up without effect.

21. The patient passed a very bad night; the tympanitis continued to extend; towards morning he vomited some mucus mixed with blood. Four forced enemata were carefully thrown up, and probably passed beyond the obstruction in the intestine, for they did not return; from this period all the symptoms were decidedly aggravated; the patient felt as if he were suffocating, and loudly demanded the operation as a means of relief. In consultation with MM. Rostan and Breschet the operation was decided upon, but during the night the patient vomited a large quantity of mucous fluid mixed with blood, This led to some discussion between the medical men on the following day. It was thought that the blood vomited might be simply an exhalation from the mucous membrane of the stomach or bowels; but on the other hand that it might indicate a cancerous disease of the pylorus, and hence that an operation was contra-indicated.

During the 22d the patient felt better; he was less oppressed, and seemed relieved by the vomiting; in the eveaing a few small enemata had been thrown up, and brought away a small quantity of fæcal matter.

On the 23rd, M. Magendie joined the other medical men in consultation; he thought that, as the patient's condition was somewhat improved, and the obstruction of the bowels not complete, it would be better to defer the operation; he recommended a continuation of the means already employed, and that an œsophagus tube should be passed up as far as the obstruction, with the hope of overcoming it; in one case which had occurred in his wards at the Hotel-Dieu, and where a cancer of the sigmoid flexure of the colon had been diagnosticated, the tube had succeeded in removing the obstruction. M. Breschet also thought that the operation should be deferred.

M. Rostan said that, as he believed there was a cancerous disease of the colon, he did not think there was another one in the stomach; in the numerous autopsies that he had made, he never found cancerous deposit in the stomach and intestine at the same time. He considered the blood vomited to have been a mere exhalation, and did not think that the operation was contra-indicated by this circumstance.

As opinions were thus divided, it was determined to delay the operation. In the evening, M. Amussat passed up an œsophagus bougie, at the extremity of which was a small wax bougie, but he was unable to pass the obstruction; on withdrawing it, the patient felt an inclination to go to stool, and passed about a spoonful of fæcal matter; for the last twenty days he never passed any thing without the aid of enemata.

24. The patient again passed some fæces with the assistance of a lavement; the abdomen is softer, and there is no sense of suffocation as before. During the next three days things remained in the same state.

28. The patient slept a little during the night, but he is depressed in spirits; the abdomen is greatly distended with gas; and for the last thirty-six hours he has not passed any wind or fæcal matter through the anus. An œsophagus bougie was now passed up to a distance of eleven inches; on withdrawing it, the end was seen to be strongly bent on itself and tinged with bloody mucus; some gas came away without any relief.

29. The tube was again introduced, and seemed to have passed the obstruction, for it entered to a depth of thirteen inches; a clyster was immediately thrown up without effect. Two forced enemata were now thrown up, and immediately passed with a considerable quantity of fæcal matter.

On the 2nd of December the tube was passed up to a depth of sixteen inches, and a lavement injected, but hardly a trace of fæces came away; from this time the evacuations were completely suppressed, and the patient insisted on having the operation performed on the 8th of December, 1841.

It was decided that the opening should be made in the right lumbar region, on account of the presumed disease at the left side. M. Amussat made a transverse incision midway between the crista illi and the last rib, and then divided the subjacent tissues, until a fold of intestine was seen; this was enveloped in fatty tissue, and an artery ran close upon it; the vessel, which had been accidentally divided, was twisted. Here, however, a great difficulty presented itself—Was the intestine seen at the bottom of the wound, a portion of the colon or of the small intestines? In this uncertainty nothing remained but to expose the muscular coat of the gut, and trust to chance; a needle armed with a ligature was passed through the intestine, and immediately some gas, having a fæcal odor, escaped. A tenaculum was now fixed close to the point where the ligature had been applied, and the intestine being steadied by these means, a small incision was made with the scissors; this was enlarged with a probe-pointed bistoury, and the finger then introduced into the gut; on withdrawing the finger, a considerable quantity of gas and fæcal matter escaped. Three enemata were now injected into the artificial opening and came away, bringing with them three washhand basinsful of fæces, containing the seeds of grapes and pear, which the patient had eaten about two months previously.

The intestine was fixed to the anterior angle of the wound by four points of suture; the patient felt immediate relief from the operation; the size of the abdomen was considerably reduced, and the breathing was much freer.

It is unnecessary to transcribe the daily reports of the case; on the 14th (7th day), M. Amussat divided the sutures by which the intestine was fixed to the wound; the patient was allowed to have a little broth.

On the 10th day he passed a very copious stool, hard and cylindrical, through the anus, a circumstance which showed that the intestinal obstruction was not complete; on the 13th day the patient was able to come down stairs from the sixth story of the house in which he lodged. From this period to the 50th day after the operation the patient continued to pass his evacuations through the artificial opening; but a quantity of muco-purulent matter was daily discharged through the anus.

On the 50th day the patient returned to his family in the country, having made a journey of thirty-nine leagues without any inconvenience.

On the 22nd of February, 1842, M. Amussat heard from his medical attendant that he continued in an excellent state, but that occasionally fetid purulent matter was discharged through the anus.

The object, then, of the operation in this case, was fully attained. During forty days the obstacle to the evacuation of the fæces was so great that the patient was reduced to imminent danger, and would, in all probability, have speedily perished; he has now a chance of living for a considerable time.

Since the operation just described, M. Amussat performed a sixth of the same kind on an infant affected with congenital imperforation of the rectum. M. Amussat had tried to open the rectum through the anus, but was unable to find the gut; he then made an artificial opening in the left lumbar region, and the infant, now two months old, is well. This is the sixth successful case which has occurred in the practice of M. Amussat.—*Gaz. des Hop.*, No. 37.

Amputations.

Mr. Rutherford Alcock gives the following as his conclusions respecting amputations, drawn from the records of the Glasgow Infirmary, the Massachusetts and Pennsylvania hospitals, the report of Mr. Guthrie after the battle of Toulouse, and his own experience: 1. That the most successful amputations, both in civil and military hospitals, are those for chronic local disease; 2, primary amputations for injuries of military life; 3, secondary amputations for injuries of civil life; 4, primary amputations for injuries of civil life; 5, secondary amputations for injuries of military life.

The following are the conclusions on the relative advantages of primary and secondary amputations for the injuries of civil and military life:—

1. Between the injuries usually received into civil hospitals of a nature to require amputation, and those occasioned by the casualties of the field, an essential difference exists, exercising a most important influence upon the progress of the case, and the results of amputation.

2. This difference consists chiefly in the greater shock, moral and physical, generally caused by the *infliction of the injury* in civil life, from which the patient does not sufficiently recover, in the first twenty-four hours, to bear the shock of an amputation; hence is this first period less favorable for the operation than one more remote, when the alarm has ceased, the febrile action had time to develop, and to be finally relieved by the suppurative process.

3. In proportion as this first shock or alarm is great in the injuries of military life, are the results produced the same. Hence amputations for wounds from cannon-shot and shells more nearly approach in their effects to the injuries of civil life. It follows that it may often happen in military practice that the system is not seriously implicated within the first few hours, and amputation may be advantageously performed; while in those of civil life, amputation within twenty-four hours adds a second violent shock to the nervous system generally, while the patient is still under a strong deleterious action from the first, and the result is either death by shock, or by the development of violent febrile action, by phlebitis, secondary inflammations, tetanus, gangrene, &c.

4. Extensive experience proves that wherever violent commotion has been sustained, deeply involving the nervous centres, and the *morale* of the patient, the operation is better borne after the suppurative process is established. In gun-shot injuries, however, where the whole of the structures of a limb are involved by the lacerating course of the ball, and the excessive comminution of bone, added to the jar or shock communicated by the crushing force of the ball in contact, a more fatal and extensive action is developed, leading to greater irritation and exhaustion in the system, than the ordinary injuries of civil life. This operation, in a subsequent period, proves less successful than when performed in civil hospitals.

5. The result of amputations performed for long existing disease of a limb, often after exhausting suppuration has been long continued, the patient emaciated and greatly debilitated, proves incontrovertibly that this is not an unfavorable state for the success of amputation. The supervening actions are generally less fatal in character, less violent in their development.—*London Lancet.*

Urethroplasty.

M. Segalas communicated to the Academy of Medicine, at Paris, the details of the following case:—A patient, when six years of age, tied a piece of string round the penis; the results were gangrene of the organ, and the formation of a fistulous opening, which gave passage to the urine and semen. The orifice in the urethra was an inch in length, and the portion of canal anterior to it was very considerably contracted.

M. Segalas placed a catheter permanently in the bladder, and divided the prepuce, to make the integuments more lax. When the wound was healed, he passed a catheter again, to guide the bistoury, with which he opened freely the membranous part of the urethra; he then withdrew the catheter, introduced a gum-elastic bougie, and converted the latter into a syphon, with an œsophagus bougie. A few days afterwards he made two semilunar incisions, before and behind the fistulous opening, dissected off the skin, and then brought the edges of the wound together with six points of twisted suture. A bougie had been passed into the wound of the membranous part of the urethra, and brought out, in front, through the meatus urinarius: the penis was now enveloped in lint dipped in cold water, and the syphon put into action. The edges of the wound quickly healed at every point, except near the left side, where the sutures were too far asunder; this however, soon contracted, and an excessively small orifice only remained. At the end of two months the wound in the perineum was allowed to heal up, but a few drops of urine now escaped from the pin-hole already alluded to. This was cauterized several times without effect; its edges were therefore resected, and brought together by a single suture. The fistulous opening was definitively cured by the last operation.

NEW YORK LANCET.

Vérité sans peur.

New York, Saturday, December 24, 1842.

We have given space in our present number to the substance of a paper on Animal Magnetism, by Dr. Mitchell, of Philadelphia—a subject which has attracted considerable attention in this region, amongst some of the profession, in consequence of the announcement of a new discovery by a philosopher from Kentucky—a State which has already astonished the world by its frequent extemporaneous experiments in optics. Dr. Buchanan is the name of the apostle of this '*new-ology.*' He is a young gentleman of reputable character and connections, and he has received a very respectable education. He has all the enthusiasm of youth, and believes that he is destined to revolutionize the old, matter-of-fact system of medicine and morals.

Dr. Buchanan's theory may be stated in a few sentences. He believes that in every individual of the human species there exists a mysterious principle, which he denominates 'neuraura,' and that this agent is perpetually oozing from one's fingers' ends; that this influence is communicable, or in other words, that one person can, by means of it, produce the most remarkable and characteristic effects on the soul and body of another. Thus, Mr. A. touches with his finger the organ of 'combativeness' on the skull of Mr. B., and Mr. B. immediately becomes pugnacious; or the organ of 'benevolence' is touched, and Mr. B. is at once inspired with unbounded love for his race; and so on, all over the cranium. The 'neuraura' again can cure bodily suffering. Thus, Mr. C. has got headache in consequence of having drank too much champaigne last night; the neurologist touches the organ of 'imbibitiveness,' and Mr. C. is relieved *instanter* from the unpleasant effects of his indiscretion.

Still more marvellous—each of the fingers possesses the power of transmitting a specific and peculiar influence. The thumb is of right, and from long established usage, the presiding power, and is, as it were, the governor of the digital congregation. This is emphatically the 'rule of thumb.' Only one man in one thousand possesses the full power of *exercising* this subtile agency, and only one in one hundred is 'impressible,' or susceptible of the magic influence. Such is in brief, and without a particle of exaggeration, the substance and spirit of the new candidate for the support of the lovers of the profound, the incomprehensible and the new.

It is hardly necessary to say, that this 'Neurology' is just another incarnation of the mysticisms and sublimities of the illustrious Mesmer. Both 'sciences' require a due contempt for vulgar 'exact reasoning and demonstration,' and both ascribe proper supremacy to a subtile and inscrutable fluid. Mesmer maintained that the sun, moon, and fixed stars mutually affect each other in their orbits; that they cause and direct on our earth a flux and reflux, not only on the sea, but in the atmosphere; and affect in a similar manner all organized bodies, through the medium of a subtile and mobile fluid which pervades the universe, and associates all things together in mutual intercourse and harmony. And Mesmer, precisely like Dr. Buchanan, found that by passing his hands in a certain way, even at a distance from the body of the subject, he could produce the most remarkable effects. The arrangements of Mesmer were well adapted for producing an impression. Those on whom he operated were assembled in a large apartment, dimly lighted, whilst mysterious music from a distant part of the building, floated on the air, and fell with softened cadence on the ears of the excited listeners. The philosopher himself was habited in delicate colored silk, and bore a wand, with which or his hand, he produced effects still more extraordinary than those which Dr. Buchanan appears to have as yet been able to create. After Mesmer, who died in 1815, came the Marquis de Puysegur, who was the discoverer of magnetic somnambulism. Three separate schools of magnetism at this time arose, as we are informed by M. Dupotet—first, the original school of Mesmer, which prevailed principally in Paris. Its doctrines are similar to those of the Epicurean philosophy, as described in the poem of Lucretius. Its disciples believed in the existence of the universal fluid, to which we have already alluded, and conducted the operation physically—that is by passing the hands immediately over, or at a short distance from the body of the subject. Second, the school of the Chevalier de Barbarin. This wrs founded at Lyons, and although it had many partisans in France, prevailed principally in Sweden and Germany. Its principles remind us of the Platonic philosophy; its disciples maintained that the magnetic operation depended entirely upon a pure 'effort of the soul,' and was to be conducted only upon psychical principles. They were, therefore, termed 'spiritualists.' Lastly came the school of the Marquis de Puysegur, founded at Strasburgh, the disciples of which, professing to be guided only by observation, called themselves 'experimentalists.'

It appears to us that the youthful Plato from Kentucky has happily combined all these dissenters. Dr. Buchanan believes in the subtile fluid, though he gives it a 'local habitation and a name;' he also depends on the aid of the soul, and he is called in his advertisement, 'the distinguished psychological philosopher;' finally, to complete the union of the three schools, he relies altogether on experiment. He combines the physical treatment of Mesmer, with the psychical treatment of Barbarin, and unites with both the experimental exactness of de Puysegur. There can be, therefore, no doubt of the truth of the discovery revealed by Buchanan. We rejoice with patriotic fervor that to our own country belongs the fame of priority in this advance to superior intelligence. Our high-pressure steam-engines have no rivals in the old world. Our explosions on the Mississippi, and in the financial circles, are of unexampled magnificence. It would be inexplicable were our strides to the summit of scientific perfection, to be measurable by European standards. Mesmer and his confreres must now hide their diminished heads.

It is fortunate for the new science, that its first patrons are just the men whose opinions in such matters will be received with public confidence. This is the age of reason—as the transcendental men would say, it is the great day of Belief. Fools and bigots who laugh at impossibilities, and ask for proof, are too contemptible to be noticed. The laws of nature are only the fictitious ordinances with which ignorant philosophers have hitherto concealed their own want of knowledge. It is impossible to estimate the blessings which 'neurology' will introduce. The bodily ills which flesh is heir to, will soon be unknown. The blind will see with their toe-nails—no one will say in faultering accents, 'I am sick'—the dead will be resuscitated. *Vive* philosophy!

THE MEDICO-CHIRURGICAL REPORTER.

Crosby-street College Surgical Clinique.--Dec. 19.

Fracture of the Forearm.—Compound fracture of the bones of the forearm, with a deposition of callous uniting the fractured extremities and becoming firmly attached to the bones.—The patient a little girl, six years of age. No attention or treatment was directed to the fracture since the occurrence of the accident; and the arm being thus neglected, the result was the formation of callous between the fractured portions of the ulna and the radius. The case had advanced so far that any treatment, it is probable, would be of little or no service in restoring the unreduced fracture.

Nævus Maternus.—The nævus maternus of last week was brought before the class, and the operation of introducing hot needles was performed, the result of which will be mentioned in a future number.

Talipes Varus.—Congenital; the child about three years old; had been under treatment in London under the care of Surgeon Gay; considerable improvement toward the correct position of the foot had been effected by their plan of treatment. The mother supposed the deformity to arise from witnessing an operation for the same difficulty during the period of utero-gestation. At the time of its birth it presented the most extreme form of this species of varus; the entire plantar surface of the foot looking upwards and inwards towards the upper extremity, the toes drawn inwards and looking backwards and upwards, and when placed on the floor rested on the external malleolus and ankle-joint. When six months old it came under the care of Gay; the compress and roller were immediately applied, and a shoe adapted to the foot was procured, and had been under treatment from that time up to the present. The foot has been gradually returning to its natural position; when placed on the floor it assumes its natural appearance, and but a slight disparity could be detected between the extremities, but on lifting up the foot it partially returns and inclines inwards. By persevering in a continued and unremitted use of the shoe, no doubt a permanent restoration might be accomplished.

Ulceration and Sloughing of the Testicles.—The patient a young man aged twenty-five; the exciting cause, excess of venery. The inflammation extended to the testicles, constantly aggravated by frequent coition and copious indulgence, finally terminated in suppuration and destruction of the right testicle, and disorganization so far advanced in the left, as to preclude the possibility of restoring the organ. Treatment:—Heat and moisture in the form of a poultice to be applied to the part, with attention to the general symptoms.

Syphilis—the tertiary form of Ricord.—The patient 30 years of age. A deep continuous ulcer covering a space of some extent on the thigh. In this stage or form of disease the hydrodrate of potassæ is employed almost as a specific, and was prescribed with some local application and general treatment. Another case with the same form of the disease, the tertiary form, having a large ulcer just below the patella, with pains in the joints and along the bones. The treatment similar.

Morbus Coxasius, or hip-disease, occurring in a child about four years of age; first noticed about a year ago; cause not known. In this instance the left hip was affected; usually and most constantly the right. The patient of a strumous diathesis, the father having died of phthisis pulmonalis before its birth. The limb was found, on comparing the extremities to be two or three inches shorter than the other, owing to the destruction of the parts about the joint causing the head of the femur to rest on the dorsum of the ilium, beside the thigh was adducted and flexed upon that of the opposite, and thus raised and carried ten or twelve inches from the floor. The first symptoms complained of were pain in the hip in the evening and at night. When standing, bearing all its weight on the sound leg, and placing one foot a little in advance of the other. Two months afterwards was confined to the bed, severe inflammation having taken place in the hip, and a large swelling or tumor occurred just above the trochanter major and disappeared without opening externally. At this time suffers no pain; walks about with the assistance of crutches, with his leg continually flexed upon the other. Pain was experienced on percussion at the knee and the trochanter major, and the least attempt to flex or bend the thigh on the abdomen produced intense and acute pain, which is a very correct and pathognomonic symptom of hip disease. The diagnosis in this case clear and distinct, though it is sometimes liable to be confounded with rheumatism. Treatment:—Rest; look to the general health, and locally counter-irritants, vesication, and friction.

This case of morbus coxasius occupied a good portion of the hour, and prevented many other interesting cases from being presented to the class. The class was large and attentive.

A Case of Laceration of the Womb,

With escape of the Child into the Abdomen; Delivered by the Cesarian Operation.

BY N. L. M'GUIRE, M. D. AND B. W. GROCE, M. D.,
Of Talladega County, Alabama.

Huldah, a negro woman belonging to Mr. Robert Jemison, of Talladega county, Alabama, in her fourteenth pregnancy, was taken with parturient pains on the evening of the 22d of June. Being sent for immediately, I was informed by the attendant female, that the pains were slight and irregular. I made no examination, but directed the nurse to inform me should the pains increase.

Huldah informed me, that in assisting to clear some new ground, she, in lifting a log, felt something (as she expressed it,) 'give way' in her right side, which afterwards became painful, and coutinued so throughout her pregnancy, gradually extending over the entire abdomen, from the right iliac region.

23d. On visiting the patient this morning, I noticed some slight parturient effort, attended with considerable pain in the right iliac. I attempted an examination per vaginam. She complained of such intense soreness, that the examination was not satisfactory—the os tincæ not being felt. The nurse informed me that she had had an escape of water three or four times, per vaginam. This account, together with the extreme tenderness of the abdomen, and vaginal soreness, brought me to the conclusion that something unusual existed in the case. Her pulse was full and strong, venesection about xiv. oz. Three hours after, pulse still full, with some dropsical appearances of the extremities. The vein was re-opened and she was blooded about x. oz. An hour or two after the last bleeding, the pains slightly increased, for a short time, and then gradually subsided.

24th. Labor pains entirely ceased; great tenderness of vagina and abdomen. Called in consultation Dr. B. W. Groce. There had been no evacuation from the bowels since the commencement of labor, owing to the mechanical obstruction offered by the child. This we endeavored to obviate by the administration of large doses of oleum ricina, assisted by stimulating emmeta. After waiting several hours, the bowels became active; we then endeavored to make a more thorough examination, the soreness, however, still extreme. The hand was partially introduced; the os tincæ not discovered, but felt some portion of the child, supposed to be the head, lying low in the upper strait, inclining to the right iliac. The abdomen considerably enlarged within the last twenty-four hours; still no uterine contractions.

25th. No pain through the night, nor any to-day; pulse becoming rapid and thready; lower extremities cold.

26th. Patient continues to sink; frequent evacuations of a serous character. P. M. pulse 150; 8½ o'clock determined on and performed the Cesarian operation, by making a longitudinal incision, extending from the pubis (in the direction of the linea alba,) one and a half inches above the umbilicus. When the incision reached the cavity of the abdomen, bloody serum gushed out profusely, accompanied with the smell of putrefaction. The finger was immediately inserted, and the extremity of the child felt. The incision being enlarged, the child was plainly seen, above and posterior to the fundus of the uterus, with its head directed towards the right iliac region. After extricating the child,[*] the cord was traced and some force exerted, which brought up *the placenta* from behind the fundus of the uterus, and from towards the transverse position of the colon. After sponging out the blood very carefully, the edges of the wound were brought together with the utmost accuracy by eight stitches of the interrupted suture, supported by adhesive straps; a compress and large roller bandage around the abdomen; for the escape of any fluid that might remain in the abdomen, or the secretion of pus, the lower angle of the wound was left open for the space of half an inch or more. The patient was then placed carefully upon her back, and every effort used to render her situation as comfortable as possible, and to obviate the least excitement. Visited the patient at 10 o'clock, and found her pulse 120, and lying perfectly easy.

27th. Patient rested well during the night; pulse this morning 125; abdomen considerably swelled; frequent evacuations, checked by anodyne enema. P. M. pulse 150; tympanitis increasing.

28th. Last night considerable delirium; patient was very restless, frequently starting up in the bed; extremities, this morning, cold, and pulse can scarcely be felt at the wrist; stimulants used freely, with sinapisms to the extremities; no reaction. A. M. 9 o'clock, patient died.

Post mortem examination—developed the peritoneum considerably thickened, with a portion of the large intestines attached to it. The fundus and anterior portions of the uterus had also formed adhesions to the peritoneum on the right side of the incision. The womb was considerably enlarged, with its blood vessels very much injected; on laying it open with the scalpel, we discovered, at its lower and posterior portion, an opening, into which we introduced three fingers, presenting rather a ragged appearance. Our examination was prosecuted no further.

REMARKS.—Immediately after, and even previous to, delivering the woman, we were under the impression that it was a case of extra-uterine pregnancy, and we should have retained that opinion, had not the post mortem examination developed a rupture of the uterus. We are, however, now convinced that there was, during the first hours of parturiency, a laceration of the womb, and an escape of the child into the abdomen.—*Western and Southern Recorder.*

Typhoid Fever in a Patient Sixty-three Years Old.

BY ELISHA BARTLETT, M. D.

On Wednesday, the 24th of August, I was invited by Dr. Butterfield, of this city, to attend the examination of a female subject, 63 years old, who had died twenty-four hours previously under the care of Dr. Huntington.—Dr. H. was unable to be present. Dr. Butterfield had seen but little of the patient; and from the very partial history, which we had then had of the symptoms, we supposed it most probable that the case had been one of disease of the brain. As the case is one of considerable interest, I shall report it in the order which, under the circumstances, we were obliged to pursue, in its investigation and diagnosis.

The organ first examined was the brain. We found, here, moderate venous congestion, and pretty abundant sub-arachnoid serous effusion. The ventricles, also, contained from half an ounce to an ounce each of clear, colorless serum. The color and consistence of the brain were in no way obviously changed.

The adipose tissue upon the abdomen was from an inch and a half to two inches in thickness; and the omentum was very much loaded with fat. The large intestine was fully distended with flatus, and the small intestines moderately so. The kidneys were somewhat softened, perhaps, but in no way very obviously altered from their natural condition. As soon as the small intestines were exposed, I was struck with the very marked, dark-colored appearance of several of Peyer's glands, and with their very manifest thickening; and I remarked to Dr. Butterfield, that, unexpected as the discovery might be to us, we were likely, I thought, to find the lesion of typhoid fever. A portion of the lower part of the ileum, about seven feet in length, was removed from the body, slit open, washed, carefully examined, and notes of its condition taken at the time. Eighteen inches from the upper end of the removed portion we found a small oval patch very considerably thickened, with prominent edges, and its surface roughened and abraded. At the distance of two inches from this we found another and larger gland, more thickened than the first, and of a mottled red color. Then, at intervals of from two to fifteen inches, until arriving at within a foot of the ileo-cæcal valve, we found eight elliptical plates, several of them quite large, one of them two and a half inches long by one inch wide; more or less extensively diseased. Most of them were of a dark-red color; they were much thickened, with prominent edges; some of them were extensively and deeply ulcerated, besides being the seat of the peculiar yellow deposition or degeneration so common in this lesion. The last ten or twelve inches of the intestine were thickly scattered over with smaller and somewhat more irregularly-shaped patches, in a condition similar to those which have just been described. This state of things terminated abruptly at the ileo-cæcal valve. Several of the isolated follicles of the ileum were red and thickened. The intervening mucous membrane was but little altered from its natural state. There were a few isolated follicles of the cæcum slightly prominent and reddened. The contents of the intestines were yellow and pultaceous. Several of the mesenteric glands, corresponding to the lower extremity of the ileum, were much enlarged, one of them to the size of the end of the thumb, softened, and of a reddish-yellow color. The spleen was enlarged, dark and softened. The consistence of the liver, also, was very decidedly diminished. The upper portion of the alimentary tube was not examined.

---

[*] The child was in a state of decomposition, and we supposed it had been dead five or six days.

The heart was softened, somewhat, though otherwise natural. There were no pleuritic adhesions, and the entire lungs were perfectly healthy, excepting that the lower and posterior edge of the right lung had undergone the kind of *carnification* common in typhoid fever. It was of a dark, bluish-red color; wholly destitute of air; not granular or hepatized; with a tough, flabby texture, not easily torn or penetrated by the fingers.

Here, then, was a case, so far as the evidence to be derived from the morbid appearances of the organs could settle the question, of typhoid fever; not doubtfully or vaguely, but, on the contrary, very clearly and unequivocally marked. It remained to be seen, whether, contrary to what we had been led to suppose, this diagnosis, founded exclusively upon the autopsy, would be justified by the history of the case during life. On inquiry of the friends of the patient, and of her physician (Dr. Huntington,) it was found that she was attacked on Monday, the 15th of August, after breakfast, with severe pain in the head; and that she complained of being very cold. She ate no dinner, but kept about during the day. Through the night she was dozy, but restless; and during the whole of the next day, she remained in bed, with increasing head-ache, and with pains over the whole body, but especially severe in the back and hips. She had no appetite, was thirsty, and inclined to sleep, though restless. This state of things continued through Tuesday night, with the addition of slight wandering delirium. On Thursday evening thero was much increase of the somnolence, so that for some hours she could not be roused. From this period up to the fatal termination of the case, there was drowsiness, dizziness, restlessness, constant pulling at the bed-clothes, delirium; and marked rigidity of the muscles of both arms, constituting, as is now well known, an almost invariably fatal symptom in this disease. For the last few days there were four or five liquid discharges from the bowels daily, of a dark yellowish color. The pulse was rapid, and during the last four or five days, irregular and intermittent. The tongue was nearly natural throughout the disease. Death took place about noon on Tuesday, the 23d of August, eight days from the commencement of the fever.

This patient had been residing, since the first of March, about seven miles from her usual home, in a neighborhood where typhoid fever had been somewhat prevalent during the summer. One of her own grand-children was sick with the disease from the 8th to the 21st of June, in the house where she lived.

The principal interest of this case is connected with the age of the patient. It is now well settled that typhoid fever is, in a great majority of instances, a disease of early life. Of one hundred and thirty-eight cases, the histories of which are analyzed in Louis's Researches, only ten were over thirty years old, and no one was over forty. Of one hundred and forty-seven cases cited by Chomel, only six were over forty years old, and only one was over fifty. The last mentioned observer says, in his Clinical Lectures on Typhoid Fever, published in 1834, that, so far as was then known, no case had been seen in which the patient was over fifty-five years of age. The alleged instances, reported by Andral, are none of them authentic cases of the disease. Of two hundred and ninety-one cases analyzed in Dr. Jackson's report, only sixteen were thirty-five or upwards. The extreme age is not mentioned. In a memoir by Gendron upon this disease in one of the French provinces, three cases are mentioned in which the patients were between fifty and sixty years old; and four in which they were between sixty and seventy-five years of age. I have ventured to make the suggestion, in a work upon this disease and upon typhus fever, now in the press, that typhoid fever may be found to occur more frequently after the fortieth year of life in the country, than in large towns and cities. This question can be settled only by the careful observations of the future; and be it as it may, I have thought it worth while to place on record the present *authentic and unequivocal example of typhoid fever, or dothinenteritis, occurring in the country, in a patient passed the sixty-third year of life.—Boston Med and Sur. Jour.*

Case of Acute Rheumatism---Pericarditis---Sudden Death.

BY P. HENNIS GREEN, M. B.

Alfred Begot, a boy, 14 years of age, was admitted into hospital October 11. For some time past the child had complained of wandering pains in the limbs, but not sufficiently severe to prevent him from working at his trade. On the 8th and 9th he experienced a general sense of fatigue, with headache, pain in the muscles of the neck, and uneasiness during the act of swallowing; in the night of the 9th the ankle-joints became red, swollen, and excessively painful; general febrile symptoms set in; and in the morning the elbow-joints were attacked in a similar manner.

Oct. 12th. The child complains of headache; the face is red, and expressive of pain; the least movement makes him cry out; the knee-joints and the left ankle are red, swollen, and painful; there is pain, without swelling or redness, in the hip-joints, and in the right shoulder-joint; he also complains of severe pain in the muscles of the neck, and is unable to move his head; skin hot, but moist; pulse 112; bowels confined; no vomiting.

He was ordered to have poultices to the joints and frictions with an anodyne liniment along the thighs.

13th. Passed a restless night; the knee and ankle-joints are less swollen; the wrist-joints are now attacked, and likewise the left elbow-joint; the abdominal muscles are excessively tense and painful; the testicles firmly drawn up; pulse 112, hard.

Ipecacuanha, fifteen grains;
Tartar emetic, one grain.

To be taken in two doses, one a half hour after the other.

14th. The child says he felt somewhat relieved after the vomiting, but the symptoms are now the same as yesterday. Bowels still confined.

Tartar emetic, four grains, in a six ounce mixture. To take a teaspoonful every second hour.

15th. The child has taken the whole of the mixture without any effect on the stomach or bowels; there is no improvement in the child's state; all the joints of the hand are now swollen and painful, and also that of the great toe; the pain in the abdominal muscles continues.

To have six grains of tartar emetic as before.

16th. Same general state; no stool yet.

Tartar emetic, eight grains.

17th. The emetic is still completely tolerated; the pulse has fallen to 100; pain less severe.

Tartar emetic, ten grains.

18th. The last dose of emetic produced vomiting; all the symptoms are alleviated; the ankle joints are free from pain and swelling, but the rheumatic inflammation still exists in the right knee and hip-joints; pulse 96.

To continue the mixture.

19th. The child vomited five times during the day, but passed no stool; he now feels constantly sick at the stomach; tongue moist and clean; no pain is now experienced, except in the abdominal muscles; the countenance, however, is expressive of deep suffering and anxiety.

To discontinue the mixture, and take a purgative enema.

20th. The enema produced one evacuation; joints all free from pain, but the child's countenance is much changed for the worse; he complains of severe pain in the epigastric region, and in the left side of the chest, low down; each inspiration aggravates the pain; pulse 102; respiration 36. The patient continued in this state, without any remarkable change, and died suddenly in the evening.

Examination Thirteen Hours after Death.

Head.—The membrane of the brain were moderately injected, and the cerebral substance healthy throughout.

Chest.—The pericardium contained about two spoonfuls of sero-purulent matter; the anterior surface of the heart, for about the extent of a square inch, was covered with false membrane of recent formation; over the rest of the organ there were numerous granules of a pale yellow color; the serous lining of the pericardium was also covered with false membrane here and there. The cavities of the heart contained a good deal of dark blood. The pleura and substance of the lungs were healthy.

Abdomen.—The mucous membrane of the stomach presented a pretty deep injection, and was softened in several points; the mucous lining of the small intestines was also much injected; there were a few ounces of serum in the cavity of the abdomen; the other viscera were healthy.

REMARKS.

In his late work on rheumatism, Dr. Macleod observes that the proportion of cases of rheumatic pericarditis is considerably greater in young subjects than in those more advanced in years. Of 226 persons laboring under acute rheumatism, and examined by Dr. Macleod, 8 were under fifteen years of age, and of these, four, or one half, had pericarditis.

That children, as well as adults, are frequently subject to rheumatic inflammation of the heart is perfectly true, but I do not think that the proportion is nearly so great as that indicated by Dr. Macleod; I have seen a much greater number of cases, and would not estimate it at more than one-fourth.

The disease, however, may frequently be overlooked in children, because its symptoms are often very obscure, and seldom so well marked as they are in adults. Of this, we have an example in the case just related. The existence of rheumatic pericarditis was not suspected during life. On the day which preceded his death, the child was to all appearance, considerably improved; the febrile symptoms had nearly disappeared, and the only unfavorable sign was a peculiar anxious and depressed expression of the countenance; on the day of his death, the expression of the countenance was of the same character, and there was some pain over the edges of the ribs at the left side; but this was attributed to irritation of the stomach, caused by the tartar emetic; the pulse and respiration were not much accelerated, nor were the general symptoms of such a nature as to attract particular attention; yet the child dies suddenly in the evening without a a struggle. To what are we to attribute this sudden and unexpected termination of the disease? Probably to syncope. The softened and injected state of the mucous lining of the stomach and intestines is a point worthy of attention; I have more than once observed this condition in children who were rapidly cut off by some disease, while taking tartar emetic in high doses. It is not easy to say how far the remedy may have contributed to bring on this state of the mucous membrane, but the coincidence has been so frequent, that I should be unwilling to employ the Italian method in children, without the greatest reserve and caution.—*Prov. Med. Jour.*

On the Opening of the Temporal Artery.

BY HUGH CARMICHAEL, ESQ., A. M.,
Surgeon to the Coombe Lying-in Hospital, Dublin.

[Mr. Carmichael has suggested a very simple method, by means of which, we may obtain from the temporal artery as much blood as we desire, notwithstanding its strong disposition, like all other arteries, to contract. Several circumstances take place after the division of this vessel which tend to arrest the bleeding. The divided extremities part from each other, and retract within the sheath of the vessel; the divided parts also contract on themselves at the point of section, diminishing thereby the calibre of the vessel at these points, while beyond them its capacity remains unaltered. In consequence of these circumstances, the blood which flows through the divided end of the vessel, soon clots; and it clots not only in the vessel itself to the next offsetting branch, but also in the sheath, and thus prevents further bleeding. This would be prevented, if the artery could be partially opened, as we open a vein in the arm, which is the way originally recommended by Dr. Jones: but, as in a small artery like the temporal, this could not be easily accomplished, we must have recourse to some other method of accomplishing the purpose; and Mr. Carmichael recommends the following simple method:—]

Let the track of the artery be first ascertained, and this being determined on, and the vessel somewhat steadied by the two first fingers, it is to be completely cut across by the stroke of a scalpel or lancet carried in the transverse direction of its course. It will then immediately commence bleeding; the blood, however, will flow but for a short time, when it gradually stops, in obedience to the law just stated, as I apprehend. If the artery be now slaped with the nail of the first or second finger fillipped from off the thumb with a little force over and upon the section of it next the heart, or in connection with the main trunk, the jet will be instantly renewed, and with something even of more force than that with which it bled on being first divided, and continue to bleed so for some time. It will then again lessen, and finally again cease, but will instantly be renewed on resorting to the same means; and so, by adopting this plan, each time the bleeding stops, slaping the cut extremity of the artery with the nail in the way mentioned, the jet of blood can be again and again brought on, and the bleeding be continued to any amount required, even from branches so small as to defy altogether the possibility of obtaining blood from them under the plan at present adopted, and though practised by the most judicious and dexterous hands.

When a sufficiency has been procured, nothing more is required than to wait the next stop, which, if necessary, may be expedited by a gentle pressure with the thumb on the bleeding section of the artery. A small dossil of lint then placed over the wound, and secured with a light bandage, is all that is required to prevent further bleeding.

The principle involved in these phenomena is, I think, obvious. The stoppage of the bleeding from time to time is the result of the formation of the clot in the artery and its sheath, which, being newly formed, is loose and easily broken up. The slaping of the cut extremity with the nail effects this. The artery, together with the sheath, is thereby cleansed of the obstruction, and the bleeding consequently is reproduced.

To ensure success, care must be taken that the artery be cut across completely, which, when small, is not so much a matter of course as might be imagined; so readily does it give way before the impress of the lancet. One stroke of the instrument may effect it; I prefer two, except where the vessel is very superficial, as it sometimes is. By the first the integuments are to be divided to the necessary extent; the second is to be carried deep, and with such a latitude as to ensure the division.—*London Medical Gazette.*

Prolapsus of the Bladder, Cured by Operation.

BY R. T. LIGHTFOOT, ESQ.

[This patient first observed a small tumor to protrude from the vagina, which gradually increased to the size of an orange, and then to the size of the fist, hanging between the thighs: the greater part was formed by the bladder and anterior paries of the vagina. After remaining in bed twenty-four hours the tumor could be easily reduced, but owing to the capacity of the vagina it soon prolapsed again in the erect posture, and was then accompanied, on making exertion, with an involuntary dribbling of urine. At the patient's urgent request for relief, Mr. Lightfoot performed the operation for episcorraphie, as recommended by Dr. Fricke, of Hamburgh, in the following way:—]

The bowels having been previously evacuated, and the hair removed from the parts, the patient was placed on a table, in the same position as for lithotomy, without, however, tying the hands and feet. The thighs being well separated by two assistants, I took hold of the left labium and transfixed it obliquely about the middle with a narrow bistoury three-quarters of an inch from the edge, and in such a manner as to include more of the skin than of the mucous membrane; the knife was then carried rapidly downwards in the same direction to the raphe, half an inch or so in front of the anus: the superior attachment of this flap was next divided, by carrying the incision upwards as high as on a level with the meatus urinarius. The same was repeated on the opposite side; after which the frenulum, and other parts included within the angle formed by the union of the two incisions in front of the anus, were carefully dissected off. The two surfaces thus formed extended from opposite the urethra to within half an inch of the anus, each being about two inches long, and varying in breadth from an inch posteriorly to half an inch anteriorly. The hæmorrhage was so trifling, as merely to require the torsion of one small vessel: the oozing having ceased, six strong hempen sutures were passed through the entire thickness of the denuded surfaces, and tied moderately firm. The first one was applied a few lines in front of the anus, and the last one immediately below the meatus urinarius.

A gum elastic catheter was introduced into the bladder. and the knees were bound together, after which the patient was placed in bed on her left side. The catheter was allowed to remain for the two first days, but owing to the large size of the urethra, part of the urine escaped by the side of the instrument, and coming in contact with the uniting surface produced a good deal of irritation; it was therefore removed, and during the five or six following days it was merely introduced occasionally. The antiphlogistic regimen was strictly adhered to for four or five days, during which cold water was constantly applied to the parts, and the vagina occasionally washed out and cleared of coagulated blood, by means of cold-water injections. An anodyne was given at bed-time, and repeated for three or four nights, to allay irritation and confine the bowels. Two of the sutures were removed on the fourth day, and the other four on the sixth: at the expiration of which, union by the first intention had taken place throughout the whole extent. The bowels were moved on the eighth day, and an occasional dose of aperient medicine was afterwards given.

In the course of three weeks she was allowed to leave her bed, and walk about a little; and on the 30th of September she was able to attend to her usual housework: she can retain her urine for from five or six hours, and can evacuate it voluntarily, and without the slightest inconvenience. The bond of union is very firm, and appears like an elongated perineum, extending from the anus to within a quarter of an inch of the urethra. The finger can be introduced into the vagina with great ease, the parts being very dilatable.

Nov. 20. Although the patient has been exposed to considerable exercise, there is not the least return of the prolapsus: on desiring her to strain violently, a portion of the corrugated anterior paries of the vagina became visible, but has not the slightest tendency to protrude externally, although the passage into the vagina is enlarged from the longitudinal contraction of the cicatrix.

In performing this operation, I think it would be better not to attempt the union of the posterior part of the labia, but to leave an opening into the vagina between the bond of union and the frenulum sufficiently large to allow of the discharge of the vaginal mucus and menstrual secretion. By adopting this method the operation would be much facilitated; the most troublesome part of it, and, at the same time, the most painful to the patient, being the dissection required for the removal of the frenulum and the parts in front of the anus. During the treatment, likewise, coagulated blood, and the secretions from the vagina and wounds, could be more easily removed; and in case of considerable inflammation occurring after the operation, cold water could be more readily and continuously applied by means of a syringe. By this modification of the operation, the union of the labia would form a kind of bridge, with two communications into the vagina. The extent of this required, would depend very much upon the case; thus, if there was considerable prolapsus of the bladder, and anterior paries of the vagina, it would be necessary to carry the union as far as the meatus urinarius, and the posterior opening might be left large enough to admit the finger. If, on the other hand, the tumor was principally formed by the uterus and posterior wall of the vagina, then it would be advisable to leave the opening just sufficiently large to admit an ordinary-sized gum-elastic catheter, and the outer one must be left of considerable extent: care, however, must be taken to make the bond of union of sufficient extent, so as to allow for the subsequent contraction of the cicatrix, otherwise one or other of the openings might become so large, as to allow the inverted mucous membrane gradually to be insinuated through it, and any unusual effort would expose the patient to a return of the complaint.—*London Lancet.*

A Case of Injury of the Thigh.

Denuded Patella—Constitutionol Shock—Emphysema—Terminating in Death.

BY W. C. SNEED, M. D., OF FRANKFORT, KY.

The following case, from the novelty of the symptoms which attended it, seems to me worthy of record. I shall detail the facts as near as I can, without attempting any explanation of the phenomena presented.

Alexander, a negro man, aged about 30, of stout, healthy constitution, came to his death by an injury received on the 2d day of August, 1842, in the following manner. He was driving a two-horse wagon, and, for the purpose of convenience, as well as to have more perfect control of the animals, by means of the lines used in such cases, he was seated on the axle of the fore-wheels with his feet projecting forwards on the pole. While in this position, the horses became alarmed and started suddenly and so unexpectedly that he lost control of them, and became entangled in the harness, &c. which attached them to the wagon. He was held in this situation until the horses ran several hundred yards; his knees the whole time dragging upon the ground, with his thighs violently pressed and firmly clamped by the harness. The horses were eventually checked, and he succeeded in extricating himself from his perilous condition without breaking any bones, but with extensive laceration of the knees. He was able to stand alone only a short time after his extrication; for the shock given to the system was so great, that, as soon as the excitement from the fright was over, he almost sunk with prostration. The accident happened a short distance from town, and as soon as assistance could be procured, he was brought to his lodgings. I saw him within an hour after the accident happened, and found him in about the following condition:—Very great alarm and agitation in consequence of the danger to which he had just been exposed; pulse not exceeding 50; soft and compressible; countenance wild and confused; mind wandering; skin cold, and bedewed with perspiration.

I made a careful examination of his head and body, but found no injury of any consequence. He complained of being hurt in the left hip, and also in the right shoulder; but, upon a very careful examination, I found that no bones were broken, and but little appearance of injury. I next examined his left leg, which seemed to be the part most seriously injured. Near the hip-joint there was a slight abrasion, but it did not seem to be of a serious character. The thigh was also considerably abraded, but apparently the injury was only superficial. Passing down the leg, I found at the knee an injury which excited the most serious apprehensions. In being dragged over the dirt, gravel, and stone, which lay in the road, the whole of the skin, fibro-cartilage and periosteum had been torn from the petella, and nearly the whole surface of that bone was laid bare and exposed. A bruised surface, the size of the palm of my hand, extended from the patella externally and laterally to the popliteal region. From these two denuded surfaces, I extracted a quantity of sand and dirt which had been literally ground into them; to do which I was compelled to cut away a quantity of shreds of the ligamentum patella and periosteum which hung from them.

Below the knee there was no injury of consequence. I examined the right leg, also, and found the injury done it trifling, with the exception of a slight laceration of the skin over the patella. After giving him a gentle stimulant, to restore the circulation to its proper equilibrium, I had him placed on a soft mattress, the injured leg extended at full length, and a soft poultice applied to the wound. By the time the wound was dressed and other matters attended to, he seemed to be very much calmed and revived. He was enjoined to keep perfectly quiet, and compose himself as much as possible.

In the evening at 6 o'clock, (the accident happened about 1 P. M.,) in company with Dr. Roberts, I visited him again, and found that he had become quite composed and was free from pain. His pulse had risen to about 73. The poultice was continued, quietude enjoined, and a dose of sal epsom ordered to open his bowels.

3d. At 7 A. M., we visited and found him doing well. The poultice had softened the edges of the wound, and there were favorable indications of the appearance of suppuration. The thigh was swollen some, but not more than we expected to find it. The lower leg and foot not swollen at all—pulse 94, soft and regular—countenance cheerful—moderate catharsis from the salts—appetite good and no thirst. Continued poultice. Evening—no material change.

4th. Patient has slept but little through the night—does not know why; complains of but little pain in the left limb, and none in the sore; bowels moved once this morning; some thirst; urine scanty and high colored; tongue dry and slightly furred; pulse 104, soft and compressible; the sore white and clean, but no further indication of suppuration—feels very sore all over, but is in no great pain—dressed the sore with stimulating applications, and applied a bandage from the foot to the hip, with directions to remain quiet. Evening—no material change. Dressing not removed.

5th. Removed the bandage, and found the wound still white, with some increase of suppuration. Knee-joint considerably swollen and painful; the thigh has become exceedingly painful, through the whole course of the rectus femoris, and the swelling considerably increased; pain in the left testicle and spermatic chord, and also in the hip-joint; slept but little through the night; no appetite; pulse 160, still possessing the same soft compressible feel which has characterized it from the commencement of reaction; urine still high colored and scanty. The wound over the patella has never been, in the slightest degree, sensitive. In order to bring on a healthy action, we concluded to apply a strong lye poultice, which was done, and kept on through the day.

At about 10 o'clock at night, I was sent for to see the patient, and found, on my arrival, that he was suffering with excruciating pain in the left thigh, from the knee to the hip. I ordered warm vinegar to be applied freely, and gave him an anodyne, which gave relief, and he slept some through the night.

6th. 7 P. M. Found the patient much worse; the thigh swollen to the hip-joint, tense and exceedingly painful; the pain in the testicle and spermatic chord greatly increased; pulse 150, and hardly perceptible at the wrists; extremities cold; countenance cadaveric; voice changed and faltering; bowels tympanitic; breathing short and hurried; tongue dry and stiff; thirst, restlessness, and fear of death. On examining the left thigh, distinct crepitation could be felt in several places, but more distinctly in the region of the rectus and vastii muscles, extending up to the superior portion of the ilium. The case was now considered hopeless by all who saw it, including nearly the whole faculty of the place. We, however, did all that we thought would be of any service, and that was to stimulate the patient freely with brandy toddy—apply mustard poultices to the extremities, with warm rocks and frictions—an enema to move the bowels, and large doses of opium to lull the pain. The emphysema continued to increase rapidly, and by night had reached nearly the whole extent of the left side. The patient ceased to complain, and at 8 o'clock expired.

Sectio cadaveris twelve hours after death. The examination was made in the presence of all the medical gentlemen of the place, and of several students.

Appearances.—The body was extensively swollen, the penis and scrotum distended to the fullest extent. On the left side, from the knee to the top of the head, there were numerous emphysematous puffs—some of them under the coats of the skin, but mostly under the epidermis.—Immediately under the left eye there was a large puff, which, on being punctured, discharged a quantity of gas. The left cheek was also full of gas. The left thigh was examined—an incision extending from the antero-inferior spinous process of the ilium along the rectus femoris to the knee was made, and that muscle exposed. When the scalpel passed through the skin, which was very tense, an evolution of gas followed with a whistling noise, resembling the escape of wind from a distinct hollow organ, when punctured. From Poupart's ligament to the knee, there was extreme hyperemia. The under surface of the skin and cellular tissue had much the appearance of a clot of coagulated blood. The rectus femoris presented the most remarkable appearance I have ever witnessed in a cadaveric examination. Its fibres were separated, and the spaces between them filled with gas. The other muscles when exposed, presented the same appearance. The capsule of the joint was laid open, and found full of serum; on turning up the patella, several ruptures were discovered, but there were no positive signs of inflammation in the synovial membrane. Below the knee there was no emphysema, and but little swelling. The right leg was of its normal appearauce.

Abdomen.—The stomach and bowels distended with gas—nothing abnormal discovered in any of the viscera.

Thorax.—Nothing unusual found in this cavity. I thought it possible there might be fracture of some of the ribs, but found none.

I am perfectly satisfied that the emphysema was not produced by the introduction of atmospheric air through the wound in the knee, for the structures in that region are so dense that it would be difficult, if not impossible, to force it in with an instrument. The case to me, as well as the physicians who witnessed the examination, was unique, and the phenomena presented inexplicable.

Several questions present themselves to my mind in reflecting upon the case. 1. What change took place in the parts that gave rise to the generation of gas? 2. Was it the mediate or immediate cause of death? 3. What course ought we to pursue in the treatment of such cases, whether stimulant or antiphlogistic? 4. Are not lacerated wounds of this kind much more dangerous than in cases where the muscular structures are alone involved?

ITEMS AND INTELLIGENCE.

Turning-Boxes at Foundling Hospitals.

The tours, or turning-boxes, are an Italian invention of the time of Sixtus IV. Their use was for many years confined to the hospice at Rome, which thence derives its name, *Della Ruota.* In France they are formed by a hole in the wall of the hospice, closed with double doors, between which a candle is placed. The act of opening the outer door, to deposit a child in the cradle, causes a bell to ring, which gives notice to the attendant in the hospice; or sometimes a cylindrical box, placed perpendicularly, and turning on a pivot, is used, and this was the original form of the tour.—*British and Foreign Medical Review.*

Vaccination.

Medical men, who are in the habit of vaccinating the children of the poor must have observed that the success of the operation is often impeded by the dry and flaccid condition of the skin to which the matter is applied. To remedy this inconvenience, M. Hulard, of Rouen, proposes the preliminary application of one or two small cupping-glasses over the part, for the purpose of stimulating its vitality, and affirms that he has had recourse to this method with the best results in a great number of cases.—*Bul. de Therap.*

The Students' Directory.

New York Hospital.—Dr. J. M. Smith visits the medical wards every Monday, Wednesday, and Friday, at one o'clock, P. M.

Doctors Hoffman and Buck visit the surgical wards alternately, every Tuesday, Thursday, and Saturday, at the above named hour.

New York Eye and Ear Infirmary is open every Monday, Wednesday, and Friday, at one o'clock. Doctors Rodgers and Wilkes in attendance.

Clinique at the College of Physicians and Surgeons every Monday, at 11 o'clock, A. M. Doctors Parker and Gilman.

Clinique at the New York University Medical School every Saturday, at 10 o'clock, A. M.

WEEKLY REPORT OF INTERMENTS

In the City and County of New York, for the week ending Dec. 17, 1842.

33 Men, 34 Women, 33 Boys, 36 Girls. Total, 136.

DISEASES.

Apoplexy	4	Intemperance	1
Abscess	2	Inflammation	0
Asphyxia	1	Of liver	1
Asthma	1	Of bladder	0
Abortion	0	Of brain	4
Bleeding	0	Of stomach	2
Bleeding from stomach	0	Of throat	4
Bleeding from lungs	0	Of lungs	6
Burned or scalded	0	Of bowels	2
Congestion	1	Of chest	0
Consumption	18	Of womb	0
Convulsions	9	Insanity	1
Croup or hives	2	Jaundice	1
Cancer	1	Killed or murdered	0
Disease of digestive organs	1	Lues Venera	2
Delirium tremens	0	Lockjaw	0
Diarrhœa	2	Malformation	0
Debility	3	Marasmus	2
Dropsy	7	Measles	1
Dropsy in head	8	Old age	3
Dropsy in the chest	0	Organic disease of heart	0
Drowned	2	Palsy	1
Dysentery	3	Premature birth	1
Disease of heart	1	Rheumatism	0
Disease of liver	1	Spinal disease	0
Disease of skin	1	Suicide	0
Erysipelas	2	Sprue	0
Exposure	1	Small-pox	3
Epilepsy	1	Tumor	0
Fever	2	Teething	2
Scarlet	10	Ulceration of intestines	0
Typhoid	4	Unknown	3
Puerperal	1	Ulceration of bladder	0
Remittent	3	Ulcers	1
Nervous	1	Varioloid	1
Inflammatory	0	Whooping cough	0
Intermittent	0	Worms	0

John H. Griscom, City Inspector.

City Inspector's Office, Dec. 19, 1842.

COLUMBIA UNIVERSITY LIBRARIES
0062040731